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HSTS SOFTWARE LISTINGS VOL. 4 OF 5 Diagnostics Part I SEARCH SYSTEM

ΑТ

NGA review(s) completed.

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		HSTS MASTER COMPUTER SOFTWARE LISTINGS	
		SL120100	
		VOLUME 4 of 5	
		Prepared for:	
		Central Intelligence Agency Washington, DC 20505	
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DIAGNOSTIC:

. TITLE . . TMT. .LIST MEB

TERM DETECTOR MEMORY TESTS MAIN MODULE

THIS MODULE EXECUTES MEMORY TEST CYCLES, ALL CONTROL INFORMATION FOR A TEST CYCLE IS OBTAINED FROM THE COMMAND LINE, TMT BUILDS TABLES AND SETS FLAGS IN ORDER THAT THERE NEED BE NO USER INTERVENTION DURING THE EXECUTION OF THE CYCLE; THE PROMPTS FOR COMMAND LINE INPUT AND GENERAL TMT ACTION ARE:

PROMPT FOR ALL TESTS, ALL MEMORIES, FULL RANGE
IF THE ANSWER IS 'Y', TMT BUILDS A COMPLETE MEMORY
TEST CYCLING TABLE, THEN PROCEEDS TO 5. (FOR THE STRUCTURE OF THE TABLE, SEE BELOW REF TABLE - CURRENT JUMP

Ì

- STRUCTURE OF THE TABLE, SEE BELOW REF THBLE CORREIN SON TABLE).

 IF THE ANSWER IS 'N', PROCEED TO 2 FOR MORE SELECTIVE PROMPTS.

 PROMPT FOR MEMORIES TO BE TESTED.

 TMT SCANS THE COMMAND LINE RESPONSE AND SETS A FLAG FOR EACH MEMORY. MNEMONIC IT FINDS.

 PROMPT FOR MEMORY LIMITS.

 IF A MEMORY WAS SELECTED IN 2 (IE, ITS FLAG WAS SET),

 TMT PROMPTS FOR NUMERICAL VALUES WHICH DEFINE THAT PORTION OF A MEMORY ON WHICH THE TESTS ARE TO BE RUN, TMT PUTS THE MEMORY LIMITS FROM THE COMMAND LINE RESPONSE INTO A TABLE.
- PUTS: THE MEMORY LIMITS FROM THE COMMAND LINE RESPONSE INTO A TABLE.

 4. PROMPT: FOR TESTS:
 TMT SCANS THE COMMAND LINE RESPONSE FOR TEST NUMBERS.
 THEN, FOR EACH MEMORY WHOSE FLAG IS UP, TMT BUILDS A ENTRY IN THE CURRENT JUMP TABLE (SEE BELOW).

 5. PROMPT: FOR LOOP ON TEST.
 TMT SETS A FLAG THAT DETERMINES WHETHER A TEST CYCLE WILL BE EXECUTED ONCE OR EXECUTED REPEATEDLY.

 6. PROMPT: FOR ERROR OPTIONS.
 TMT SETS BY ACCUMENTATIONS.
- TMT-SETS-FLAGS-WHICH-DETERMINE-WHAT-ACTION-WILL-BE
- 7. PUT: OUT: DIRECTIONS: FOR: STOPP ING: TEST:
 TMT: ALLOWS: THE: TEST: CYCLE: TO: BE: INTERRUPTED: BY:
 AN: UNSOLICTED: CHARACTER: INTERRUPT: FROM: THE: TERMINAL: TEST - CYCLE - BEGINS
- NO.MORE.PROMPTING.

REFERENCE · TABLE · - · CURRENT · JUMP · TABLE ·

THE ACTUAL EXECUTION OF A TEST CYCLE DEPENDS UPON THE CONTENTS OF THE CURRENT JUMP TABLE. TMT FILLS IN THIS TABLE BY MOVING ENTRIES FROM THE REFERENCE TABLE DEPENDING. UPON-WHICH-MEMORIES-AND-WHICH-TESTS-WERE-SELECTED.

EACH-TEST-1 - 12-HAS-ITS-OWN-CONTROL ROUTING IN THIT.
THE-REFERENCE-TABLE-ENTRIES-ARE-THE-ADDRESSES-OF-THESECONTROL-ROUTINES-FOR-EACH-TEST THE-REFERENCE-TABLE
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TMT---

GONTAINS IN CONTIGUOUS POSITIONS THE CONTROL ROUTINE ADDRESS REPLICATED A NUMBER OF TIMES, THE NUMBER OF REPLICATIONS IS EQUAL TO THE NUMBER OF MEMORIES THAT CAN BE TESTED (IE. 6. THE VALUE OF THE EQUATE 'MEM'). SO, FOR EXAMPLE, SINCE THERE ARE 6 MEMORIES, TEST, 1'S CONTROL ROUTINE ADDRESS WILL BE REPEATED IN THE REFERENCE TABLE 6 TIMES:

.WORD - T1, T1, T1, T1, T1, T1

EACH ADDRESS HERE IS A PLACE-HOLDER FOR A MEMORY. THAT, IS, THE FIRST '71' (POSITION 0) IS A PLACE-HOLDER FOR FSA-A, THE SECOND '71' (POSITION 1) IS A PLACE-HOLDER FOR FSA-B, THE THIRD (POSITION 2) FOR FSA-C, THE FOURTH (POSITION 3) FOR THE INPUT BUFFER, THE FIFTH (POSITION 4) FOR THE OUTPUT BUFFER, AND THE SIXTH (POSITION 5) FOR THE BYTE TRANSLATOR, THE IDEA HERE IS THAT RATHER THAN HAVING SEPARATE CONTROL ROUTINES FOR EACH MEMORY FOR EACH TEST, TMT.CAN MAKE USE OF THE POSITIONS OF ADDRESSES IN THE TABLE.

THE FILL ING OF THE CURRENT JUMP TABLE TAKES PLACE AS FOLLOWS: A UNIQUE FLAG IS SET IN A FLAG WORD FOR EACH MEMORY WHOSE MNEMONIC TMT ENCOUNTERS IN THE COMMAND LINE RESPONSE THE THE PROMPT SELECT MEMORIES: EACH POSITION IN THE FLAG WORD (0 - 5) CORRESPONDS TO A MEMORY PLACE HOLDER POSITION IN THE FLAG FOR FSA IS IN CURRENT JUMP TABLE. EG. THE FLAG FOR FSA IS IN POSITION O IN THE FLAG WORD AND THE PLACE HOLDER POSITION FOR FSA A IS 0 (SEE ABOVE). THEN FOR EACH TEST NUMBER THE ENCOUNTERS IN THE COMMAND LINE RESPONSE TO THE PROMPT SELECT TEST(S)', TMT MOVES THE ADDRESS OF THAT TEST'S CONTROL ROUTINE FROM THE REF TABLE TO THE CURRENT JUMP TABLE DEPENDING UPON THE MEMORY FLAG SETTINGS, IE, TMT SCANS THE MEMORY FLAG. WORD AND FOR EVERY BIT SET MOVES AN ADDRESS FROM THE REF TABLE TO THE CURRENT JUMP TABLE.

EXAMPLE:

IF TMT ENCOUNTERS A.'1' IN THE COMMAND LINE RESPONSE TO SELECT TEST(S)' AND THE FLAGS FOR FSA-A AND THE OUTPUT.

BUFFER: HAVE BEEN PREVIOUSLY SET. TMT WILL MOVE TEST IS CONTROL ROUTINE ADDRESS FROM THE REF TABLE TO THE CURRENT JUMP TABLE IN POSITIONS 0 AND 4 FOR TEST 1.

REF.TABLE: .WORD: T1.T1.T1.T1.T1.T1 .WORD: T2.T2.T2.T2.T2.T2.T2

MEMORY-CYCLING.

THE CYCLE CONTROL ROUTINE MAINTAINS A POINTER TO THE CURRENT JUMP TABLE. THE CONTROL ROUTINE SCANS THE TABLE UNTIL IT FINDS A NON-ZERO ENTRY. IT DERIVES THE MEMORY

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TO BE-TESTED FROM THE PLACE-HOLDING CHARACTERISTICS OF THE · TABLE:

- GETS THE POSITION OF THE CURRENT NON-ZERO ENTRY.
- RELATIVE: TO: THE BEGINNING OF THE TABLE; DIVIDES THIS NUMBER BY THE NUMBER OF MEMORIES, THE REMAINDER GIVES THE PLACE-HOLDER VALUE.

FOR-EXAMPLE, IF-'INPUT BUFFER' AND-'TEST-2' HAVE-BEEN SELECTED, THE-CURRENT-JUMP-TABLE WILL-CONTAIN-THE-FOLLOWING-INFORMATION:

. MORD 0.0.0.0.0.0 0.0.0.T2.0.0

THE FIRST NON-ZERO ENTRY IN THE TABLE IS AT OFFSET 9. THE REMAINDER FROM THE DIVISION OF 9 BY 6 (6 = NUMBER OF MEMORIES) IS 3. THE VALUE 3 IS THE PLACE+HOLDER VALUE FOR THE INPUT BUFFER.

THE CONTROL ROUTINE PASSES CONTROL TO THE TEST CONTROL ROUTINE WHOSE ADDRESS IS THE CURRENT NON-ZERO ENTRY IN THE CURRENT JUMP TABLE. THE CYCLE CONTROL ROUTINE PASSES THE REMAINDER FROM THE ABOVE DIVISION IN RØ. THE TEST CONTROL ROUTINE USES THE CONTENTS OF RØ AS AN INDEXT INTO A TABLE OF TMT SUB-MODULE MEMORY TEST ADDRESSES. THE TEST CONTROL ROUTINE IN TURN PASSES CONTROL TO THE ROUTINE IN THE SUB-MODULE THAT WILL EXECUTE THE TEST ON THE CORRECT MEMORY.

ALL-SUB-MODULE-ROUTINES-ARE-LOCATED-IN-THE MODULE-TTEST.

ALL OF THESE ROUTINES RETURN TO THE TEST CONTROL ROUTINE THAT CALLED THEM, THE TEST CONTROL ROUTINES RETURN TO THE CYCLING ROUTINE WHICH SCANS THE CURRENT JUMP TABLE FOR THE **NEXT : NON-ZERO : ENTRY:**

EXIT FROM THE PROGRAM DEPENDS UPON THE STATUS OF THE CURRENT JUMP TABLE, LOOP OPTIONS, HALT OPTIONS, OR TERMINAL INPUT.

JUMP · TABLE · EMPTY ·

EXIT:

LOOP · OPTION · OFF EXECUTE ONE TEST CYCLE

LOOP · COUNT · HALT-OPTION-ON-

EXECUTE A NUMBER OF CYCLES EQUAL TO THE LOOP COUNT HALT AFTER ONE ERROR

THE TRUE TO

N ...

- HALT AFTER ONE ERROR - PRINT A NUMBER OF MESSAGES EQUAL TO THE · COUNT · AND · HALT ·

WHILE THE TESTS ARE RUNNING THE ENTERING FROM THE TERMINAL OF ANY CHARACTER OTHER THAN W. C. P. OR T. (THESE HAVE SPECIAL MEANINGS - SEE THE ROUTINE 'AST') STOPS THE TESTS IMMEDIATELY.

MEMORY TESTS:

COUNT: + "H"

117 118

119 128 121

122

128 129

130

131 132 133

146 147

148 149 150

152

153 154

155 156

157

158

160

161

162

```
FEST-02 WRITE-ZEROS ...
TEST-03 WRITE-125252
TEST-04 WRITE-125252
TEST-05 WRITE-125252
TEST-05 WRITE-125252
TEST-06 WRITE-146314 AND 031463
TEST-07 WRITE-ADDRESS COMPLEMENT-INTO ADDRESS-TEST-08 WRITE-000377 AND 177400
TEST-09 SHIFT-BIT-TEST-
TEST-10 WRITE-USER-SUPPLIED-TEST-PATTERN-
TEST-11 BIT MARCH-TEST-
TEST-12 ADDRESSING-TEST-
172
173
174
175
176
177
178
180
181
182
183
184
185
                                                                                   ASSEMBLY:
                                                                                                                                FROM-[5,3]
186
187
                                                                                   MCR>MAC.TMT, LP=IMO4, TMT.
188
                                                                                    TASK BUILD:
                                                                                                                                 :ON-TERM DETECTOR-PACK-
189
                                                                                   TMT, TMT=TMT, TTEST
190
191
192
                                                                                   /.
PAR=PAR14K⋅
                                                                                   TASK=...TMT
ASG=TT0:1
ASG=TT0:2
194
195
196
```

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TMT------ MACRO-M1110 27-MAR-80 15:38 PAGE-9
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          198
           199
          200
                                                                                                                              LOCAL DATA AREAS
          201
          202
          203
                                                                                                                               .MCALL 010W$$,Q10$$,EXIT$$,ABRT$$,GCML$,GCMLB$,FSRSZ$,CLEF$$,ASTX$$
          204
          205
          206
                                         ABBBBB
                                                                                                         LUN.TT.
                                                                                                                                                                                             :LUN.FOR TTØ
:EVENT.FLAG.FOR.TTØ
          207
                                          000001
                                                                                                         EFN:1
          208
                                          000002
                                                                                                         CMILUN.
                                                                                                                                                   2
                                                                                                                                                                                              :LUN FOR GCML
          209
          210
211
                                                                                                                              SETTINGS OR FLAG WORD BASE!
          212
                                         000001
                                                                                                         LOOP
                                                                                                                                                                                             :LOOP.FLAG.
:TEST.6 IN.EFFECT.
:TEST.10 IN.EFFECT
          213
                                         000002
                                                                                                         TEST6
                                                                                                                                                   2
          214
                                         000004
                                                                                                         TEST10
                                                                                                                                                   4
          215
                                         000010
                                                                                                         ALLTST
                                                                                                                                                   10
                                                                                                                                                                                             :ALL · TESTS · IN · EFFECT
          216
                                         000020
                                                                                                         HALT.
                                                                                                                                                   29
                                                                                                                                                                                             :HALT FLAG
          217
                                         000040
                                                                                                         ERROR
                                                                                                                                                   40
                                                                                                                                                                                              :ERROR · HAS · OCCURRED
          218
          219
                                                                                                                              SETTINGS FOR FLAG WORD 'SELECT'
          220
          221
222
                                         000001
                                                                                                         Α
                                                                                                                                                                                             :FSA·-
                                                                                                                                                                                                              A
                                         000002
                                                                                                         В
                                                                                                                                                  2
                                                                                                                                                                                             ;FSA-- B
          223
                                         000004
                                                                                                                                                   4
                                                                                                                                                                                             ;FSA --
                                         000010
                                                                                                                                                                                            :INPUT BUFFER
:OUTPUT BUFFER
                                                                                                                                                   10
          225
226
227
                                         000020
                                                                                                         0
                                                                                                                                                  20
                                         000040
                                                                                                         Τ
                                                                                                                                                  40
                                                                                                                                                                                             :BYTE · TRANSLATOR ·
                                                                                                                              .NLIST
          229
                    000000
                                         131574
                                                              077434313
                                                                                                        MYSELE:
                                                                                                                                                                                            ;ABORT-THIS-TASK-
;RECEIVER-FOR-CHAR FROM TERMINAL
                                                                                                                             .RAD50
         230
                    000004
                                         300000
                                                                                                        ASTWRD:
                                                                                                                              . WORD
                                                                                                                                                  Й
          231
                    000000
                                                                                                         STAT:
                                                                                                                              .BLKW
                                                                                                                                                                                                      STATUS
          232
                    000012
                                         ававая
                                                                                                                                                                                            ; INFO/ERROR·MESSAG INDEX;
; INFO/ERROR·MESSAGES·TO·PRINT
; VALUES·CONVERTED·FROM·COMMAND·LINE;
; WORK·FIELD·FOR·UPPER·MEMORY LIMITS;
; WORK·FIELD·FOR·LOWER·MEMORY LIMITS;
                                                                                                         ERWORD:
                                                                                                                              .WORD
                                                                                                                                                  0
                    000014
                                         000000
                                                                                                        ERLIM:
                                                                                                                              .WORD
         234
                    000016
                                         000000
                                                                                                        BIND:
                                                                                                                               .WORD
         235
                    000020
                                         000000
                                                                                                        UPPER:
                                                                                                                              .WORD
                                                                                                                                                 0
         236
                    000022
                                         000000
                                                                                                         LOWER:
                                                                                                                              .WORD
                                                                                                                                                  ō
         237
                    000024
                                        000000
                                                                                                        BASE:
                                                                                                                              .WORD
                                                                                                                                                                                            GENERAL FLAG:
SUSER-TEST-PATTERN
ADDRESS SKIP-FACTOR-FOR-TEST-6
         238
                    000026
                                         000000
                                                                                                        MT10:
                                                                                                                              . LIDED
         239
                    000030
                                        000000
                                                                                                         T6FACT:
                                                                                                                             .WORD
                                                                                                                                                 Й
         240
                                                                                                                                                                                           #ADDRESS SKIP-FHCIUK-FUK-TEST

*COMMAND LINE-BUFFER-

*COMMAND LINE-LENGTH-

*POINTER TO-COMMAND-LINE-

*HIGH-WORD-OF-PASS COUNT-FALL

**COUNT-FALL TO SEE T
                   000032
                                                                                                        GCMBUF:
                                                                                                                                                  41.
         241
                    000154
                                        000000
                                                                                                        GCMLEN:
                                                                                                                              .WORD
         242
                   000156
                                        000000
                                                                                                        GCMPHT:
                                                                                                                             .WORD
         243
                   000160
                                        000000
                                                                                                        PASSH:
                                                                                                                              .WORD
         244
                    000162
                                        000001
                                                                                                        PASS:
                                                                                                                              .WORD
                                                                                                                                                                                           :LOW-WORD-OF-PASS-COUNT-
:LOOP-COUNT-
:MEMORY-SELECT-FLAG-WORD
                   000164
         245
                                        000000
                                                                                                        LOOPCT:
                                                                                                                             .WORD
         246
                   000166
                                        000000
                                                                                                        SELECT:
                                                                                                                             .WORD
         247
                   000170
000172
                                        000000
                                                                                                                                                                                            CURRENT JUMP TABLE POINTER
CURRENT JUMP TABLE COUNT
                                                                                                       MTPHT:
                                                                                                                             . MORD
                                                                                                                                                 Й
         248
                                        000000
                                                                                                        MTCHT:
                                                                                                                             .WORD
         249
                   000174
                                        000000
                                                                                                                             .WORD
                                                                                                       SETTBL:
                                                                                                                                                  T$FSAA
                                                                                                                                                                                            ;SELECT.FSA-A.;SELECT.FSA-B.
        250
                  000176
                                        000004
                                                                                                                             .WORD
        251
                  000200
                                       000014
                                                                                                                             .WORD
                                                                                                                                                 T$FSAC
                                                                                                                                                                                            : SELEDINA PROPERTY
        252
        253
254
                                                                                                                            TABLE - USED - IN - TRANSLATING - FROM - ASCII - DECIMAL TO - BINARY
```

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255 000202
                                           TROCT: ..
256
              0002631
                                                             .+61
1,2,3,4,5,6,7,8.,9.,10.,11.,12.
TROCT+177
257
    000263
                 001
                           002
                                     003
258
              0004011
259
269
                                                    STRING OF ALL TESTS (USED AS PSEUDO COMMAND LINE)
261
262-000401
                                     062 ÁLLSTR: .ASCII /1 2 3 4 5 6 7 8 9 11 12/
263
              000027
                                           STRLEN-
264
265
                                                    VALID MEMORY MNEMONICS AND MEMORY SELECT FLAG SETTINGS
266
267
268
    000430
                                           CTBL:
    000430
                  101
                           115
                                                             ZAMZ
                                                                                ;FSA·A·
270
    000432
              00000i
                                                    .WORD
.ASCII
    000434
                           115
                                                             /BM/
              000002
272 - 000436
                                                    .WORD
                                                             Β·
273
    000440
                           115...
                 103
                                                    .ASCII-
                                                             /CM/
                                                                                :FSA-C-
274
    000442
              000004
                                                    .WORD
.ASCII
275
    000444
                 111
                           102
                                                             ZIBZ
I÷
                                                                                : INPUT BUFFER.
276
    000446
              000010
                                                    .WORD
    000450
                           102
                  117
                                                     .ASCII.
                                                              /0B/
                                                                                ;OUTPUT-BUFFÉR-
278 000452
              000020
                                                    . WORD
                                                             0 -
279
    000454
                 102
                           124
                                                    .ASCII.
                                                             ZBTZ
                                                                                :BYTE · TRANSLATOR
280
    000456
              000040
                                                    .WORD
28 i
                                          CNUM-
                                                             <.-CTBL/4>
282
283
                                                    MEMORY-TEST-CONTROL-ROUTINE-ADDRESSES-(REFERENCE)
284
285
    000460
                                          MTREE:
286
    000460
              0060641
                       006064* :006064*
                                                    .WORD
                                                             T1, T1, T1, T1, T1, T1
T2, T2, T2, T2, T2, T2
T3, T3, T3, T3, T3
287
    000474
              0060741
                       0060741
                                 0060741
                                                    .WORD
288
    888518
              006110
                       006110
                                 0061101
                                                    .WORD
              0061261
                       0061261
                                 006126*
                                                    .WORD
290
    000540
              006144
                       0061441
                                 0061441
                                                             T5.T5.T5.T5.T5.T5
T6.T6.T6.T6.T6.T6
T7.T7.T7.T7.T7
                                                    .WORD
              006174
291
    000554
                       006174*
                                                    .WORD
    000570
              0062004
292
                       006200
                                 ·006200*
                                                     .WORD
293
              0062101
                       0062101
    000604
                                 0062101
                                                    .WORD
              006240°
006274°
294 000620
                       0062401
                                                    . WORD
                                                             T9.T9.T9.T9.T9.T9
T10.T10.T10.T10.T10
T11.T11.T11.T11.T11
295
    000634
                       006274:
                                 0062741
                                                    .WORD
              006300° 006300°
006424° 006424°
    000650
                                 0063001
                                                    .WORD
297
                                 006424
                                                    .WORD
                                                             T12, T12, T12, T12, T12, T12
298
299
                                                    LOWER-AND-UPPER-MEMORY LIMITS (REFERENCE)
300
301
    000700
                                          LIMREF:
302.000700
              001777
                                                    .WORD
                                                             1777
                                                                                :FSA-A-UPPER-LIMIT
303 000702
              000000
                                                    .WORD
                                                             Ø
304 000704
              001777
                                                     .WORD
                                                              1777
                                                                                ;FSA-B.UPPER.LIMIT
305
    000706
                                                    .WORD
                                                             Й
306
307
    000710
000712
              001777
                                                    .WORD
                                                             1777
                                                                                :FSA-C:UPPER:LIMIT
              природа
                                                    .WORD
    000714
              163776
                                                                                ; INPUT BUFFER UPER LIMIT
                                                    . MORD
                                                             163776
309 000716
310 000720
              160000
                                                    .WORD
                                                             160000
              003776
                                                             3776
                                                                                :OUTPUT-BUFFER-UPER-LIMIT-
311 000722
             000000
                                                    .WORD
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;BYTE · TRANSLATOR · UPPER · LIMIT
                                                             .WORD
                                                                       255.
312-000724
313 000726
314
                999377
                                                                       0
                000000
                                                                       <.-LIMREF>/2.
                                                 LIMNUM.
                000014
315
                                                             MEMORY.TEST.ROUTINE.ADDRESSES.(CURRENT.JUMP.TABLE)
316
317
                                                                                             :NUMBER - OF - TESTS
                                                  TESTS:
318
                                                                                             : NUMBER - OF - MEMORIES
                                                 MEM.
                000006
                                                                       6.
320 000730
321 000730
                                                  MTSUB:
                                                             .BLKW-
                                                                       <TESTS*MEM>
321
322
                                                             LOWER-AND-UPPER-MEMORY LIMITS-(CURRENT-TEST)
323
324
325
326
      001150
                                                  CURL IM:
      001150
                                                             .BLKW-
                                                                       LIMNUM-
327
328
329
                                                             SUB-MODULE MEMORY TEST ROUTINE ADDRESSES
 330
                 000000G-000000G-000000G-STADDR:
                                                                        STUFF, STUFF, STUFF, STUFI, STUFO, STUFT
                                                             .WORD
 331
      001200
                                                                        T1F,T1F,T1F,T11,T10,T1T
.WORD T6F,T6F,T6F,T6I,T60,T6T
T7F,T7F,T7F,T7I,T70,T7T
T12FD,T12FD,T12FD,T12ID,T12OD,T12TD
                                                             .WORD
332
333
      001214
                                                   :T6ADDR:
                                                  T7ADDR: .WORD
 334
      001230
                 000000G 000000G 000000G
                 000000G · 000000G · 000000G · TCDADD : 000000G · 000000G · 000000G · TCUADD :
                                                             .WORD
 335
      001244
                                                             .WORD
                                                                        T12FU, T12FU, T12FU, T12IU, T12OU, T12TU
 336
337
      001260
 338
                                                             ERROR · ROUTINE · WORK · AREAS ·
 339
340
                                                                                              ; TEST - PATTERN -
 341
      001274
                                                  CKDATA::
                                                              .WORD
                                                                                              ;TEST-12 READ-TEST PATTERN:
;TEST-12 WRITE-TEST-PATTERN:
;CURRENT MEMORY-ADDRESS:
;ADDRESS AT-ERROR:
;NUMBER-OF-ERRORS:
                                                             .WORD
                                                                        Ø
                 000000
                                                  CK2::
CK3::
 342
      001276
                                                              .WORD
 343
      001300
      001302
                                                  PREADD::
                                                               .WORD
                                                                        0
 344
                 000000
                                                  ERRADD:: .WORI
ERRCT:: .WORD
                                                                        ŏ
                                                               .WORD
 345
      001304
                 000000
                                                                        õ
 346
      001306
                 000000
                                                                                              ; ERRONEOUS RESULTS FROM MEMORY - 1
                                                  ERW1::
                                                              .WORD
                  300000
      001310
 347
      001312
                                                  ERW2::
                                                              d sold.
                                                                        0
                                                                                              ; - 2
; - 3
 348
                  000000
      001314
                  000000
                                                   ERW3::
                                                              .WORD
 350
      001316
001323
                                                                        /· /·
/TEST·/·
/PASS·/·
                      й4й
                                 040
                                                   ASWRK:
                                                              .ASCII
 351
                      124
                                 105
                                            123
                                                   TMSG:
                                                              .ASCII
 352
                                                              .ASCII.
 353
      001330
                      120
                                 101
                                            123
                                                   PMSG:
                                                                        /FAILING MEMORY: /
                                                   FMSG:
      001335
                      106
                                 101
                                            111
                                                              .ASCII. /ADDRESS: /
                                                   AMSG:
 355
      001355
                      101
                                 104
                                            104
                                            120
                                                              .ASCII.
                                                                        /EXPECTED: /
 356
357
      001366
                      105
                                 130
                                                   EMSG:
       001400
                      122
                                 105
                                            103
                                                   RMSG:
                                                              .ASCII /RECEIVI
                                                                         ∠RECEIVED: ∠.
       001412
                                 040
                                            052
                                                   UNMSG:
  359
                                                              MEMORY NAMES
 360
361
362
                                                   ÉTBL:
       001417
                      186
                                 123
                                            101
 363
364
      001417
001425
                      106
                                 123
                                            101
                                                              .ASCII:
                                                                         ZESA-B.Z.
                                                                         /FSA-C./
                                 123
116
                                            101
120
  365
      001433
                      106
                                                                         /INPUT
                                                              .ASCII
 366
367
      001441
001447
                      111
117
                                 125
                                                                         ZOUTPUTZ -
ZBTRANSZ -
```

.ascII-

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001455

102

122

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Mary Mary Mary
TMT------ M
               0 M1110 27-MAR-80 15:38 PAGE 9-3
                                          Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3-
     369
     370
371
                                                              PRINT-LINE
                                                    ż
                                                                                                                         -----
     372.
373 001463
                        015
                                   012
                                                              .BYTE
                                                                        15,12
                                                                                                       :PRECEDE : PRINT LINE : WITH : CRLF :
     374 001465
                                                   PRINT:
                                                              .NLIST
                                                                        MEB
     376
377
                    000116
                                                              .REPT
                                                                        78.
                                                              BYTE
                                                                        40
     378
                                                              .ENDR
                                                                        MEB
                                                              .LIST.
     380
381
     382
                                                              TABLE - OF - MESSAGES -
     383
     384
     385
          001603
                        ดดด
                                                               .BYTE
                                                                        0
          001604
     386
                                   012
                        015
                                             015
                                                              .BYTE
                                                                        15, 12, 15, 12
          001610
                         124
                                             123
                                   105
                                                              .ASCIZ
                                                                        /TEST(S) ENDED/-
15,12,15,12
     388
          001626
                        015
                                   012
                                             015
                                                              BYTE
     389
          001632
                        124
                                   105
                                             123
                                                              .ASCIZ
                                                                         /TEST(S) HALTED/
          001651
                        015
                                   012:
                                                                        15.12
                                                              .BYTE
                                                                        15,12-

ENTER: ANY: CHARACTER: TO:STOP:TEST(S)/-
15,12:15,12:

MEMORY: TEST(S) STARTED/
15,12:15,12:15,12:

TERM: DETECTOR MEMORY: TEST: DIAGNOSTICS/-
15,12:
     391
          001653
                         105
                                   116
                                                              .ASCIZ
     392
          001717
                        015
                                   012
                                             015
                                                              .BYTE
     393
          001723
                         115
                                             115
                                                              .ASCIZ
.BYTE
                                   105:
     394
          001752
                        015
                                   012
                                             015
     395
          001760
                        124
                                   105
                                                              .ASCII
     396
          002025
                                  012
012
                                             000
                                                               .BYTE
                                                                         15,12,0
          002030
                        015
                                                                        15.12.

/TEST 6 INCOMPATABLE WITH MEMORY LIMITS. TEST DISCARDED: //
                                                              .BYTE.
     398
          002032
                         124
                                   105
                                             123
     399
          002122
                        015
                                   012
                                                              .BYTE
          002124
002157
                                   122
012
012
     400
                         105
                                             122
                                                               .ASCII
                                                                         /ERROR: NO SELECTIONS. EXIT./
     401
                         015
                                             000
                                                               BYTE -
                                                                        15,12,0
     402
          002162
                        015
                                                              .BYTE
                                                                        15.12
     403
          002164
                         111
                                   116
                                             126
                                                              .ASCIZ:
                                                                        /INVALID ERROR OPTION/
          002211
     4Ñ4
                        015
                                   012
                                                              .BYTE
                                                                        15.12
                                   116
012
     495
                         111
                                             126
                                                                         ZINVALID LOOP OPTIONZA
     406
          002237
                         015
                                                               .BYTE
                                                                         15.12
     407
          002241
                         111
                                   116
                                             126
                                                              .ASCIZ
                                                                        /INVALID-TEST PATTERN/
     408
          002266
                         015
                                   012
                                                               .BYTE
                                                                         15,12
                                                               .ASCĪZ
     409
          002270
                                   116
012
                         111
                                             126
                                                                         /INVALID TEST NUMBER/
          002314
     410
                         015
                                                               .BYTE
                                                                         15.12
     411
          002316
                                   114
                                                                         ZILLEGAL ODD ADDRESS/
                                             114
                                                               .ASCIZ
     412
413
          002342
                         015
                                   012
                                                               .BYTE
          002344
                        111
015
                                  116
012
                                             126
                                                               ASCIZ
                                                                        /INVALID UPPER MEMORY-LIMITS/
     414
          002400
                                                                         15.12
                                                               .BYTE
     415
          002402
                         111
                                   116
                                             126
                                                              .ASCIZ
                                                                        /INVALID LOWER MEMORY LIMITS/
     416
417
          002436
002440
                         015
                                   012
                                                               .BYTE
                         111
                                   116
012
                                             126
                                                               ASCIZ-
                                                                         /INVALID MEMORY.OR.BUFFER.MNEMONIC/
     418
          002502
                         015
                                                               .BYTE
                                                                         15.12 \cdot
     419
          002504
                         111
                                   116
                                             126
                                                               .ASCIZ
                                                                        /INVALID-RESPONSE/-
     42A
          882525
                        015
105
                                  012
116
                                                               BYTE.
          002527
                                             124
                                                              .ASCIZ:
                                                                        /ENTER · ERROR · CONTROL/ ·
     422 002553
423 002555
                                  012
117
012
                        0i5
                                                               .BYTE
                                                                        15,12
                        114
015
                                             117
                                                              .ASCIZ-
                                                                        /LOOP · ON · TEST(S)?/
     424
          002576
                                          BYTE: 15.12:
124
ASCIZ: ENTER: PATTERN FOR TEST: 187:
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     425
          002600
                         105
                                   116
```

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TMT------MACRO-Mill® 27+MAR+80 15:38 PAGE-9-4 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                         .BYTE
    426 002632
                      015
                                012
    427
         002634
                                105
                                         114
                                                         .ASCIZ
                                                                  /SELECT TEST/
    428
         002650
                      015
                                012
                                                         .BYTE
                                                                  15,12
        002652
002722
                                         124
                                                         .ASCIZ
                                                                  /ENTER·MEMORY·LIMITS·FOR BYTE·TRANSLATOR/
    429
                      105
                                116
    430
                      015
                                012
                                                         .BYTE
                                                                  15.12
    431
         002724
                       105
                                                         .ASCIZ
                                                                  ZENTER MEMORY LIMITS FOR OUTPUT BUFFER
                                116
                                          124
    432 002772
433 002774
                      015
                                012
                                                          BYTE
                       105
                                116
012
                                          124
                                                          .ASCIZ
                                                                   ENTER MEMORY LIMITS FOR INPUT BUFFER/
     434
                      015
                                                         .BYTE
                                116
012
116
     435
         003043
003101
                      105
015
                                          124
                                                          ASCIZ
                                                                  /ENTER·MEMORY·LIMITS·FOR FSA+C/
     436
                                                         BYTE
                                                                  15,12
                       105
                                                         .ASCIZ
                                                                  /ENTER MEMORY LIMITS FOR FSA-B/
                                          124
     438
         003141
                      015
                                012
                                                          .BYTE
         003143
                                116
012
                                          124
                                                         .ASCIZ
.BYTE
                                                                   /ENTER-MEMORY-LIMITS-FOR FSA-A/
     439
                       105
     440
         003201
                      015
                                                                   15, 12
     441
          003203
                                105
                                                                   /SELECT: MEMORY/:
                                          114
                                                         .ABCIZ
     442
         003221
                       015
                                012
                                                         .BYTE
                                                                   15.12
     443
         003223
                       101
                                                                  /ALL TESTS, ALL-MEMORIES, FULL-RANGE-?/-377
                                114
                                          114
                                                         .ASCIZ
     444
          003271
                                                         .BYTE
                       377
                                               ASCIZ:
     445
     44F
     447
         003272
                                               PMSG2:
     448
                       120
         003272
                                          123
                                                         .ASCII. /PASS.NUMBER./
     449
                   000014
                                               PM2LN
                                                                   .-PMSG2
     450
     451
         003306
                                               ENDOF:
         003306
                                                         .ASCII. /END OF.PASS./
     452
                       105
                                116
                                          104
     453
                   000014
                                               ENDLH
                                                                   .-ENDOF
     454
                                                         .EVEN
     455
                                                                  BEX.
                                                         .LIST
     456
                                                         .N_IST
                                                                  CND
     457
     458
     459
                                                         COMMAND-LINE MACRO
     469
     461
          003322
                                                GCMBLK: GCMLB$
                                                                  2, GCMBUF, CMILUN
          003322
003364
003370
                       002.
                                                         .BYTE
                       002
                                                                  CMILUN
                   003510
                                                          .WORD
                                                                  65$
          003376
                       001
                                                          BYTE
          003341
003462
                       йййС
                                                          .BYTE
                                                                  FD:TTY!FD:REC!FD:CCL
                       000
                                                          .BYTE
          003463
                       047
                                                          BYTE
                                                                   GE.COM!GE.IND!GE.CLO!GE.SIZ
          003474
003476
                                002
                                                          BYTE
                                                                                                                   77.7
                   003550
                                                          .WORD
                                                                   64$
          003500
                   0000321
                                                          .WORD
                                                                  GCMBUF
          003502
                       015
                                012
                                                          .ASCII
                                                                  ₹15>₹12>
          003504
                       040
                                040
                                          040
                                                          .ASCII
          003507
                       076
          003516
                   012321
                                                          .RAD50
                                                                   ZCMIZ
          003520
                   000000
                                                          .WORD
                                                                   Ø
          003522
003524
                   000000
012314
                                                         .WORD
.RAD50
                                                                  0
                                                                   2CMD/
          003546
                   000120
                                                          WORD.
                                                                   80.
     463 003630
                                                         FSRSZ$
```

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TMT------ M
    465
    466
467
                                                         ENTER HERE
     468
     469
    470
                                                          PROMPT FOR ALL MEMORIES, ALL TESTS
     471
     472
         003630
                                                START:
     473 003630
                   004767
                             005240.
                                                                                      :ISSUE · INFORMATION MESSAGE
                                                                   PC.OUT1
     474
         003634
                   004767
                            005370
                                                ALL:
                                                          JSR
                                                                   PC.ALLSEL
                                                                                      : ISSUE · PROMPT
     475
         003640
                   103003
                                                                                      :NEED.A.RESPONSE.
:'INVALID RESPONSE'
:PROMPT.AGAIN.
                                                          BCC
                                                                   1$
         003642
                   004767
                                                                   PC, ERR2
                                                          JSR
     477
         003646
                   000772
                                                                   ALL.
     478
         003650
                   004767
                                                          JSR.
                             004420
                                                                   PC.FIND.
                                                1 :
                                                                                      :LOCATE · RESPONSE · IN · COMMAND LINE ·
     480
         003654
                   103003
                                                          BCC
                                                                                      :OK, VALIDATE RESPONSE
                                                                   2$
     491
         003656
                   004767
                             005266
                                                          JSR
                                                                   PC, ERR2
     482
         003662
                   000764
                                                          BR
                                                                   ALL.
                                                                                      :PROMPT-AGAIN-
     483
     484
                                                          PARSE · RESPONSE ·
     485
     486
         003664
                   122711
                                                          GMPB.
                            000116
                                                2$:
                                                                   #fH, (R1)
                                                                                      :N = NO
     487
         003670
                   001435
                                                                   MTRTH-
                                                                                      #NOT-ALL
#Y-=-YES
#OK, SET UP-FOR-ALL-
                                                          BEO.
     488
         003672
                   122711
                             000131
                                                                   # 'Y . (R1)
                                                          CMPB -
     489 003676
                   001403
                                                          BEQ.
                                                                   MOVE
     490 003700
                   304767
                             RR5244
                                                          JSR
                                                                   PC.ERR2
                                                                                      : MUST BE Y OR N
         003704
                   000753
                                                                                      ; PROMPT - AGAIN -
                                                          RR.
     492
                                                         SET.UP.MEMORY.LIMITS.TABLE.FOR.CURRENT.TEST.COPY.REFERENCE.TABLE.TO.CURRENT.TABLE.(IE. TEST.
     493
     494
     495
                                                         MEMORIES OVER THEIR FULL RANGE).
     496
     497
         003706
                   012700
                                                MOVE:
                                                          MOV
                                                                   #LIMREF,R0
                                                                                      ;POINT TO REF TABLE:
;POINT TO CURRENT TABEL:
;NUMBER OF WORDS TO MOVE
                   012701
012702
     498
         003712
                             0011501
                                                                   #CURLIM,R1
                                                          MOV.
         003716
     499
                            000014
                                                          MOV-
                                                                   #LIMHUM, R2
                   012021
         003722
                                                         MOV.
                                                15:
                                                                   (R0)+.(R1)+
                   005302
     501 003724
     502.003726
                   001375
     503
                                                          MOVE-ALL-OF-MEMORY-TEST-REFERENCE-TABLE-TO CURREN ENTUMP-
     505
                                                          TABLE:
     596
     507
         003730
                   012700
                             0004601
                                                          MOV
                                                                   #MTREF, RØ
         003734
                   012701
                             0007301
                                                                   #MTSUB,R1 ;POINT.TO.CURREN
#KTESTS*MEM>,R2.;NUMBER.OF.WORDS
                                                          MOV-
                                                                                      :POINT TO CURRENT TABLE
     509
         003740
                   012702
                             000110
                                                          MOV
     510 003744
                   012021
                                                2$:
                                                          MOV-
                                                                   (R0)+,(R1)+
     511
         003746
                   005302
                                                          DEC
                                                                   R2.
     512-003750
513
                   001375
                                                          BNE .
                                                                   2$
                                                                                      SET FLAG FOR ALL TESTS
    514
515
                                                          JUMP TO LOOP SELECTION
         003752
                                                          BIE.
    516
                   852767
                             000010...174044
                                                                   #ALLTST,BASE
         003760
                   000167
                            001046
                                                          JMP
                                                                   LPRMPT.
```

TMT----- MACRO-M1110 27-MAR-80 15:Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

```
520
                                                       PROMPT FOR MEMORY SELECTION
521
                                                        IF RESPONSE IS (CR), SELECT ALL MEMORIES
522
524
                                             MTRTN:
525 003764
                                                                                      ;CLEAR-MEMORY-SELECT-FLAG-
;PROMPT-FOR-MEMORY SELECTION
                                                                  SELECT:
526
     003764
               005067
                         174176
                                                                 PC.MEMSEL
PC.FIND
                                                        JSR
                         005230
527 003770
528 003774
               994767
                                                                                      :FIND MEMORY MNEMONIC IN COMMAND LINE
               004767
                                                        JSR
                         004274
                                                                  MEMTOP: ;A MNEMONIC WAS FOUND #<A+B+C+I+O+T>, SELECT: ;SET-ALL MEMORIES SELECTED
                                                        BCC
     004000
               103004
                         000077
                                   174156
                                                        BIS
530 004002
               852767
                                                                                      : NOW PROMPT FOR MEMORY LIMITS
                                                                  PL IM
                                                        BR
531 004010
               000425
532
                                                        LOOP.TO.PROCESS.MEMORY MNEMONICS (THERE.MAY.BE.MORE
533
                                                        THAN ONE IN THE COMMAND LINE) . EG:
534
535
 536
                                              MEMTOP:
 537
     004012
                                                                                      :MNEMONIC.LENGTH.MUST.BE.2
                                                        CMP
                                                                  #2,R0
                         000002
               022700
538
539
     004012
                                                                                      :OK, CONTINUE
                                                        BEO.
                                                                  2$
     004016
               001403
                                                                                      ; INVALID MNEMONIC
                                                        JSR
 540
                          005120
                                                                                      ;START-OVER-WITH-PROMPT
                                                                  MTRTH-
 541
     004024
               000757
542
543
                                                        MATCH-MEMORY MNEMONIC-AGAINST A TABLE OF VALID MNEMONICS
                                                        AND THEIR ASSOCIATED MEMORY FLAG SETTINGS.
 544
                                              ;
 545
                                                                                      NUMBER OF VALID MEMORY MNEMONICS
                                              2$:
                                                        MOV
                                                                  #CNUM<sub>2</sub>RØ
                          000006
 546
     004026
                012700
                                                                                      :POINT:TO:TABLE:OF MNEMONICS
:MATCH:COMMAND:LINE:
                                                                  #CTBL,R2
                                                        MOV.
      004032
                012702
                          000430'
 547
                                                        JSR
                                                                  PC.SCAN
 548
      004036
                004767
                          004140
                                                                   3$
                                                                                      OK, CONTINUE:
 549 004042
                103003
                                                                  PC.ERR3
                                                         JSR
                          005074
 550
     004044
                004767
                                                                                      :START-OVER
                                                                  MTRTN -
                                                        BR
      004050
                000745
 551
 552
                                                        SUBRTH·SCAN·SETS·R1 -> FLAG.
LOOK.FOR·NEXT.MNEMONIC IN.COMMAND·LINE. IF THERE·IS
ONE, PROCESS IT. IF·THERE·IS·NONE, FALL·THROUGH·TO·
PROMPT·FOR·MEMORY·LIMITS.
 553
 554
 555
 556
                                                                                       ;SET.FLAG.FOR.MEMORY.SELECTED.
                                                                   (R1) .SELECT:
      004052 051167
                           174110
                                               3$:
                                                         BIS.
                                                                                       FIND HEXT MEMORY MISHMONIC IN COMMAND LINE SOMETHING MORE IS THERE
 558
                                                         JSR.
                                                                   PC.FIND.
      004056
                004767
                           004212
 559
                                                         BCC
                                                                   MEMTOP
                103353
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TMT---
               RO-M1110 27-MAR-80.15:38 PAGE-12
                                           Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     562
     563
                                                                PROMPT FOR MEMORY LIMITS. READ AND VERFIY THEM.
     565
     566
     567
                                                                SCAN-THE-MEMORY-SELECT FLAG-WORD FROM-POSITION 0 TO
                                                                POSITION:5. FOR:EVERY:MEMORY:WHOSE:FLAG:IS SET, CALL SUBRTH:'LIMITS':
     568
     569
     570
     571
          004064
                                                     PL IM:
     572
          004064
                     012700
012701
                                000001
0112201
                                                                MOV.
                                                                          #A,R0
#PMPTA,Ri
                                                                                                :START:TESTING:WITH:FSA-A:
:POINT:TO:FIRST:PROMPT:MESSAGE
     573
                                                                                               POINT TO FIRST PROMPTIMESSAGE:
POINT TO REFERENCE LIMITS TABLE:
          004070
          004074
                     012702
                                000700*
     574
                                                                MOV
                                                                           #LIMREF, R2
     575
          004100
                     012703
                                0011501
                                                                MOV-
                                                                           #CURL IM. R3
                                                                                                : POINT: TO: CURRENT: LIMITS: TABLE:
     576 004104
                     012704
                                000006
                                                                                                :LOOP · COUNT · = · NUMBER · OF · MEMORIES
     577
                                                                                               ;WAS·MEMORY·SELECTED·
;NO, BUMP·POINTERS
     578
          004110
                     030067
                                174052
                                                     14:
                                                                BIT
                                                                          R0.SELECT.
     579
           004114
                     901437
                                                                BEQ
                                                                          5$
                                                                                                ;SAVE TEST BIT
     580
           004116
                     010046
                                                                MOV
                                                                           R0,-(SP)
     581
          004120
                     010146
                                                                MOV
                                                                           R1,-(SP)
                                                                                                ADDR OF PROMPT MESSAGE
     582
          004122
                                                                                                :MOVE · UPPER · REF · LIMITS
:MOVE · LOWER · REF ¡ LIMITS
                     011246
                                                                           (R2),-(SP)
2(R2),-(SP)
                                                                MOV
      583
          004124
                     016246
                                000002
                                                                MOV
     584 004130
                     004767
                                003646
                                                                JSR
                                                                           PC, LIMITS.
     585 004134
                                                                           (SP)+,2(R3)
(SP)+,(R3)
(SP)+,R1
                                                                                                :MOVE-IN CURRENT-LOWER-LIMITS
:MOVE-IN CURRENT-UPPER-LIMITS
:RESTORE POINTER-TO-PROMPTS-
                     012663
                                000002
                                                                MOM
     586
          004140
                     012613
                                                                MOV.
     587 004142
                     012601
                                                                MOV
     588
          004144
                     012600
                                                                MOV
                                                                           (SP)+,R0
                                                                                                :RESTORE TEST BIT
      589
                                                                INPUT-BUFFER AND OUTPUT-BUFFER INCREMENT THEIR ADDRESSES BY 2. DO NOT ALLOW AN ODD ADDRESS IN
     590
     591
      592
                                                                EITHER THEIR LOWER OR UPPER LIMITS.
      593
           004146
     594
                     032700
                                000010
                                                                BIT
                                                                           #1,R0
                                                                                                : CHECKING - INPUT - BUFFER -
           004152
004154
     595
                     001003
                                                                BNE
                                                                                                :YES, DO NOT ALLOW ODD ADDRESS
     596
                                                                                                CHECKING OUTPUT BUFFER
NO. SKIP ODD ADDRESS CHECK
IS LOWER LIMIT ODD ?
                                000020
                     032700
                                                                BIT
                                                                           #0,R0
           004160
                     001415
                                                                BEQ
                                                                           5$
     598
          004162
004170
                     032763
                                000001
                                           000002.
                                                                           #1,2(R3)
     599
                     001403
                                                                BED
                                                                           4$
                                                                                                :NO, CONTINUE
     600
           004172
                     004767
                                004732
                                                                           PC,ERR6
                                                                JSR
                                                                                                :PROMPT-AGAIN-FOR-LIMITS
:IS-UPPER-LIMIT ODD
      601
           004176
                     000747
                                                                           2$
     692
           004200
                     032713
                                000001
                                                     45:
                                                                BIT
                                                                           #1,(R3)
     603
           004204
                     001403
                                                                                                :NO, CONTINUE
                                                                BEQ
                                                                           5$
           004206
                     004767
                                                                JSR
     604
                                004716
                                                                           PC, ERR6
      605
           004212
                     000741
                                                                BR
                                                                                                :PROMPT-AGAIN-
                                                                           2$
     686
           004214
                                                                                                :FINISHED.7.
     607
                     005304
                                                     5$:
                                                                DEC
                                                                           R4
           004216
                     001410
      608
                                                                BEQ
                                                                           ENDL IM-
                                                                                                :YES:
           004220
                                                                                                :SHIFT TO TEST NEXT BIT
                      006300
                                                                ASL
                                                                           RØ.
                                                                                               BACK-UP PROMPT-ADDR-POINTER
BUMP-REF-POINTER
BUMP-CURRENT-POINTER
TEST-NEXT
                                                                           #4.R1
      610
           004222
                      162701
                                000004
                                                                SUB
                     062702
062703
     611 004226
612 004232
                                999994
                                                                ADD
                                                                           #4,R2
                                                                                                :BUMP · CURRENT · POINTER
:TEST · NEXT
                                000004
                                                                ADD
                                                                           #4,R3
     613 004236
                     000724
                                                                BR
                                                                           1$
```

```
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          615
          616
         617
                                                                                                                         SELECT-TEST(S)
         618
         619
                                                                                                                        PROMPT FOR TEST NUMBERS: IF THE RESPONSE IS CORE (CARRAIGE RETURN ONLY), MOVE A PSEUDO COMMAND LINE INTO THE COMMAND LINE BUFFER: THIS PSEUDO LINE CONSISTS OF THE TEST NUMBERS FOR ALL TESTS EXCEPT TEST 10 (USER PATTERN), PROCED TO PROCESS THIS LINE AS THOUGH IT WAS ENTERED FROM THE TERMINAL.
         620
          621
          622
          623
          624
          625
                                                                                                                                                                                                                                                                                               15
         626
         627
                   994249
                                                                                                     ENDL IM:
                   004240
         628
                                       004767
                                                                                                                                                                                     :PROMPT.TO.SELECT.A.TEST.
:SCAN.COMMAND.LINE FOR.A.TEST.NUMBER:
:FOUND.A.TEST.NUMBER:
:POINT.TO.A.STRING WITH.ALL.TESTS.
                                                            004724
                                                                                                                         JSR
                                                                                                                                             PC.SELTST.
PC.FIND.
                   004244
                                       004767
                                                            004024
                                                                                                                         JSR
         630
                   004250
                                        103024
                                                                                                                         BCC
                                                                                                                                             SELOOP -
         631
                   004252
                                       012700
                                                            000401*
                                                                                                                         MOM
                                                                                                                                             #ALLSTR,RØ
                   004256
         632
                                       012701
                                                            0000321
                                                                                                                         MOV
                                                                                                                                                                                     POINT TO COMMAND BUFFER
                                                                                                                                             #GCMBUF,R1
                   004262
         633
                                       012702
                                                            000027
                                                                                                                                                                                     GET LENGTH OF STRING:
                                                                                                                                             #STRLEN, R2
         634 004266
635 004270
                                        112021
                                                                                                     1#:
                                                                                                                         MOVB
                                       005302
                                                                                                                         DEC
         636
                   004272
                                       001375
                                                                                                                         BNE
                                                                                                                                             1$
                  004274
                                       012767
                                                            000027 : 173652
                                                                                                                                                                                     #MOVE LENGTH OF SIMULATED STRING FOR STRING 
                                                                                                                         MOV
                                                                                                                                             #STRLEN, GCMLEN
                                       012767
                                                            0000321 173646
         638 004302
                                                                                                                        MOV
                                                                                                                                             #GCMBUF,GCMPNT
         639
                  004310
                                       004767
                                                            003760
                                                                                                                         JSR.
                                                                                                                                             PC.FIND.
         640
         641
                                                                                                                        PROCESS: ONE: TEST: NUMBER: AT: A: TIME: FIRST: VALIDATE
         642
                                                                                                                         THE · NUMBER :
         643
         644
                   004314
                                                                                                    SELOOP:
         645
                   004314
                                       022780
                                                            000002
                                                                                                                        CMP
                                                                                                                                             #2,R0
                                                                                                                                                                                      :TEST NUMBERS ARE 1 BYTE EACH
         646
                   004320
                                       002416
                                                                                                                        BLT.
                                                                                                                                             SERR
                                                                                                                                                                                     :NO-G00D
         647
                   004322
                                       003007
                                                                                                                                            1$
#*1,(R1)+
                                                                                                                        BGT
                                                                                                                                                                                      SINGLE DIGIT, PROCESS IT
         648
                  004324
                                       122721
                                                                                                                        CMPB
                                                                                                                                                                                      :TENS DIGIT?
                  004330
         649
                                       001012
                                                                                                                                                                                     #MUST-BE 1
#LOAD-1'S-DIGIT-
#ADD-VALUE-OF-TENS DIGIT-
                                                                                                                        BNE .
                                                                                                                                             SERR
         650
                  004332
                                       111103
                                                                                                                                             (R1).R3
                                                                                                                        MOVB
         651 004334
                                       062703
                                                           000012
                                                                                                                        ADD.
                                                                                                                                             #10..R3
         652 - 004340
                                       000401
                                                                                                                                             TRT.
                                                                                                                                                                                     : AND - CONTINUE
         653
         654
                                                                                                                        TRANSLATE SINGLE DIGIT FROM ASCII DECIMAL TO BINARY. IF A ZERO VALUE IS RETURNED FROM THE TRANSLATION.
         655
         656
                                                                                                                        THE ASCII CHARACTER IS INVALID.
         657
         658
                  004342
                                                                                                                                                                                     :LOAD TEST NUMBER (ASCII)
:POINT TO TRANSLATE TABLE
:ADD VALUE OF ASCII NUMBER
:MOVE BINARY VALUE FROM TABLE
:SOMETHING WAS THERE
                                       111103
                                                                                                    1$:
                                                                                                                        MOVB
                                                                                                                                             (R1),R3
         659
                  004344
                                       012704
                                                           0002021
                                                                                                    TRT:
                                                                                                                        MOV.
                                                                                                                                             #TROCT,R4
         668
                  004350
                                       060304
                                                                                                                        ADD.
                                                                                                                                            R3.R4
(R4).R3
         661
                  AA4352 -
                                       111403
                                                                                                                        MOVB
         662
                  004354
                                       001012
                                                                                                                        BNE -
         663
                                                                                                                        INVALID-CHARACTER, PUT OUT-MESSAGE, CLEAR-CURRENT-JUMP
TABLE-AND-GO BACK-TO-PROMPT-AGAIN.
         664
         665
         666
        667
                  004356
                                       004767
                                                           004542
                                                                                                    SERR:
                                                                                                                        JSR
                                                                                                                                            PC.FRRZ
                 004362
        668
                                                                                                                        MÖŸ
                                      012700
                                                           0007301
                                                                                                                                            #MTSUB,R0 :POINT THE RESTS WIEW > R1 :LOAD NUMBER OF WORDS IN TABLE
                 004366
                                       012701
                                                           000110
                                                                                                                        MOV-
        670 004372
                                      005020
                                                                                                                        CLR
                                                                                                                                            (R0)+
                                                                                                   3$:
                                                                                                                                                                                     :RESET TABLE
        671 004374
                                      005301
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0 · M1110
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672 - 004376
                                 001375
                                                                                                                          BNF -
673
          004400
                                 000717
                                                                                                                          BR
                                                                                                                                                ENDL IM-
                                                                                                                                                                                            :TRY-AGAIN-
                                                                                                                           IF TEST-NUMBER = 6 OR 10, SET-A-FLAG-FOR
675
676
677
                                                                                                                          LATER ACTION.
678
          004402
                                                                                                    ZREL:
679
          004402
                                  122703
                                                       000012
                                                                                                                          CMPB
                                                                                                                                                #10..R3
                                                                                                                                                                                            :TEST-10 (USER-TEST-PATTERN)
                                                                                                                                                                                            ;NO, DO:NOT:PROMPT
;PROMPT:FOR:TEST:PATTERN:(LATER);
;TEST:6 (CROSS:TALK)
688
         004406
                                 001003
                                                                                                                          BNE
                                                                                                                                                 1$
68 i
         004410
                                 052767
                                                       йййййй4
                                                                            173406
                                                                                                                          BIS
                                                                                                                                                 #TEST10,BASE
                                  122703
682
          004416
                                                       000006
                                                                                                    1:5:
                                                                                                                          CMPB
                                                                                                                                                 #6,R3
683
          004422
                                 001003
                                                                                                                          BHE .
                                                                                                                                                2$
                                                                                                                                                                                            ;NO. DO.NOT.PROMPT
;SET.FLAG.FOR.LIMITS.CHECK:LATER.
684 004424
                                 852767
                                                       000002
                                                                            1173372
                                                                                                                          BIS
                                                                                                                                                 #TEST6, BASE
685
686
                                                                                                                         MAKE TEST NUMBER ZERO+RELATIVE: MULTIPLY THE ZERO+
RELATIVE TEST NUMBER BY THE NUMBER OF MEMORIES X 2
TO GET A BYTE OFFSET INTO THE REFERENCE TABLE AND CURRENT JUMP TABLE: FOR EXAMPLE, IF THE ASCII TEST NUMBER WAS 2, THE ZERO+RELATIVE NUMBER IS 1. THIS NUMBER IS
MULTIPLIED BY 12 TO GET A BYTE OFFSET = 12.
687
688
689
690
691
692
693
                                                                                                                          ADD-THE-PRODUCT-TO-THE START-ADDRESS-OF-THE-CURRENT-JUMP-TABLE-AND-PUT-THE-RESULT-IN-RO. ADD-THE-SAME-PRODUCT TO-THE-START-ADDRESS-OF-THE-REF-TABLE-AND-PUT THE-RESULT-IN-
694
695
697
                                                                                                                          Ri. THE RESULTS ARE:
698
                                                                                                                          GURRENT-JUMP TABLE-(ASSUMING-TEST-2-SELECTED)
.WORD- 0.0.0.0.0.0
.WORD- 0.0.0.0.0.0
 700
70 i
782
703
                                                                                                                          REFERENCE - TABLE -
704
                                                                                                                           JUNED -
                                                                                                                                                T1.T1.T1.T1.T1.T1
705
                                                                                                                           .WORD
                                                                                                                                                T2, T2, T2, T2, T2, T2
706
787
                                                                                                                          RØ -> FIRST Ø IN THE SECOND LINE FOLLOWING "CURRENT JUMP TABLE"
708
                                                                                                                          R1 -> FIRST.T2.IN.THE.REFERENCE.TABLE.
709
710
711
           004432
                                 005303
                                                                                                                          DEC
                                                                                                                                                R3
                                                                                                                                                                                            712.004434
                                 010301
                                                                                                                          MOV-
                                                                                                                                                R3.R1
           004436
                                 012700
                                                        000014
                                                                                                                          MOV
                                                                                                                                                 #<MEM*2>,R0
714 004442
715 004446
                                 004767
                                                       000000G
                                                                                                                           JSR.
                                                                                                                                                PC.$MUL
R1.R3
                                 010103
                                                                                                                          MOV
                                                                                                                                                                                            ;MOVE·PRODUCT·TO·R3
;POINT·TO·JUMP·TABLE·
716 004450
                                 012700
                                                       000730
                                                                                                                          MOV.
                                                                                                                                                 #MTSUB,R0
717
           004454
                                 660300
                                                                                                                          ADD
                                                                                                                                                R3.R0
                                                                                                                                                                                            :ADD OFFSET
718 004456
                                 012701
                                                        000460
                                                                                                                                                #MTREF,R1
                                                                                                                          MOV
                                                                                                                                                                                            :TABLE WITH ALL SUBRIN ADDRESSES (REFERENCE)
719 004462
720
721
                                 060301
                                                                                                                          ADD
                                                                                                                                                R3.R1
                                                                                                                          DEPENDING UPON WHICH MEMORIES HAVE BEEN SELECTED FOR TESTING, MOVE ADDRESSES OF ROUTINES THAT GOVERN TESTS FROM THE REFERENCE TABLE TO THE JUMP TABLE (MTSUB). START TESTING THE MEMORY
722
723
724
725
                                                                                                                          SELECT FLAG AT POSITION 0 (FSA-A).
                                                                                PROCEEDING WITH THE ABOVE EXAMPLE ASSUMING IN ADDITION THAT FSA-B WAS THE MEMORY SELECTED. THIS ROUTINE WOULD FILL THE CURRENT JUMP TABLE IN THE FOLLOW MEMORE ASSUMED TO THE FOLLOW MEMORE THE 
726
727
728
```

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729
730
731
732
733 004464
734 004470
735 004474
736 004500
737 004500
737 004502
738 004504
                                                                                                                                                                                                                                                                                                                                                                                                                      .WORD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.0.0.0.0.0
                                                                                                                                                                                                                                                                                                                                                                                                                      .WORD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.T2.0.0.0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #A,R2.
#MEM,R3
                                                                                                               012702
                                                                                                                                                                                         000001
                                                                                                                                                                                                                                                                                                                                                                                                                  MOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :START WITH-FSA-A:
:TOTAL-NUMBER-OF-MEMORIES
:WAS-MEMORY-SELECTED:
                                                                                                               012703
                                                                                                                                                                                         000006
                                                                                                                                                                                                                                                                                                                                                                                                                    MOV.
                                                                                                               030267
                                                                                                                                                                                         173466
                                                                                                                                                                                                                                                                                                                                          3$:
                                                                                                                                                                                                                                                                                                                                                                                                                  BIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R2, SELECT.
                                                                                                               001401
                                                                                                                                                                                                                                                                                                                                                                                                                  BEQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4$
                                                                                                               011110
                                                                                                                                                                                                                                                                                                                                                                                                                  MOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (R1),(R0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :MOVE-FROM-REF-TO-CURRENT-
:BUMP-POINTERS-
:SHIFT-TO-TEST-NEXT-BIT-
                                                                                                              022120
006302
                                                                                                                                                                                                                                                                                                                                          4$:
                                                                                                                                                                                                                                                                                                                                                                                                                  CMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (R1)+,(R0)+
   738 004504

739 004506

740 004510

741 004512

742

743

744

745

746

747 004514
                                                                                                                                                                                                                                                                                                                                                                                                                  ASL
DEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R2 ·
                                                                                                                 005303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :FINISHED ?
                                                                                                               001370
                                                                                                                                                                                                                                                                                                                                                                                                                  \label{transfers} \begin{array}{ll} {\sf TRANSFERS} \cdot {\sf BETWEEN} \cdot {\sf REF} \cdot {\sf TABLE} \cdot {\sf AND} \cdot {\sf CURRENT} \cdot {\sf JUMP} \cdot {\sf TABLE} \cdot {\sf ARE} \cdot {\sf COMPLETE} \cdot {\sf FOR} \cdot {\sf ONE} \cdot {\sf TEST} \cdot {\sf NUMBER} \cdot {\sf NOW} \cdot {\sf SCAN} \cdot {\sf THE} \cdot {\sf COMMAND} \cdot {\sf LINE} \cdot {\sf FOR} \cdot {\sf THE} \cdot {\sf NEXT} \cdot {\sf TEST} \cdot {\sf NUMBER} \cdot {\sf NOW} \cdot {\sf SCAN} \cdot {\sf TABLE} \cdot {\sf NEXT} \cdot {\sf TEST} \cdot {\sf NUMBER} \cdot {\sf NOW} \cdot {\sf SCAN} \cdot {\sf TABLE} \cdot {\sf NOW} \cdot 
                                                                                                                                                                                                                                                                                                                                          į
      747
                                       004514
                                                                                                                 004767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PC.FIND
                                                                                                                                                                                         003554
                                                                                                                                                                                                                                                                                                                                                                                                                      JSR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FIND NEXT TEST REQUEST IN COMMAND LINE PROCESS IT
      748 004520
                                                                                                                  103275
                                                                                                                                                                                                                                                                                                                                                                                                                  BCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SELOOP.
```

Trax.

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750
751
752
                                                                    FINISHED WITH COMMAND LINE FOR TESTS.
753
754
                                                                    PROMPT FOR TEST PATTERN (IF TEST 10 WAS SELECTED).
755
                                                                                                         :WAS TEST 10 SELECTED
756
      004522
                  032767
                               000004 1.173274
                                                                                 #TEST10,BASE
757
     004530
                  001421
                                                                    BEO
                                                                                 T6CHK
                                                                                                         :NO. SKIP ALL THIS
     004532
758
                               884426 L
                                                        PMPTIA:
                  004767
                                                                    JSR
                                                                                 PC,USRTST.
                                                                                                          :PROMPT
759
      004536
                  004767
                                                                     JSR
                                                                                PC.FIND.
                               003532
                                                                                                         FIND A NON-BLANK IN COMMAND LINE.
760
      004542
                   103003
                                                                                 1$
761
                  004767
900770
      йй4544
                               004350
                                                                     JSR
                                                                                 PC.ERR8
762 004550
                                                                                 PMPT10
                                                                     BR
                                                                                                         :TRY-AGAIN
                                                                                 PC PACK
      004552
                   004767
                               003634
                                                                     JSR
                                                                                                         :CONVERT TEST PATTERN TO BINARY
764 004556
                   103003
                                                                     BCC
                                                                                                         : CONVERSION OK .
765 004560
                   004767
                               004334
                                                                     JSR
                                                                                 PC,ERR8
      004564
                   000762
766
                                                                     BR
                                                                                 PMPT10
767
      004566
                               173224 - 173232 -
                                                                                 BIHUD, MT10
                                                                                                         ; PUT PATTERN · IN A · SAFE · PLACE
768
769
                                                                    770
771
772
                                                                     ENTRIES FOR TEST 6.
775
      004574
                                                        TECHK:
776
      004574
                   032767
                               000002
                                          173222
                                                                    BIT
                                                                                 #TEST6,BASE
                                                                                                         :WAS-TEST-6 SELECTED-
      004602
                  001476
                                                                    BEQ.
                                                                                 CHECKØ
                                                                                                         ;NO, SKIP AROUND
778 004604
                   005001
                                                                    CLR
                                                                                 R1 ;START-PLACE-HOLDER-VALUE-=-0
#MTSUB+<5*<MEM*2>>,R0 ;POINT-TO-TEST-6 ADDRESSES
#MEM,R2- ;LOOP-COUNT-=-NUMBER-OF-MEMORIES
779 004606
                   012700
                               0010241
780 004612 012702
                               000006
                                                                    MOV-
 781
                                                                    FOR EACH MEMORY TO COME UNDER TEST 6, CHECK WHETHER THE MEMORY LIMITS ARE COMPATABLE WITH THE TEST, TEST 6 REQUIRES AT LEAST THREE MEMORY LOCATIONS IN ORDER TO
782
783
 784
785
                                                                    WORK · CORRECTLY.
 786
 787
 788
                                                           ******
 789
                                                                                                                                                             ### E7
 790
                                                                    HOW-TEST-6 WORKS. RATIONALE-BEHIND-3 LOCATION-RULE.
                                                                                                                                                              4.71
 791
                                                                    TEST-6 CLEARS-MEMORY-FROM THE LOWER-TO-THE UPPER-LIMIT, IT THEN WRITES-ALL-1'S IN-THE-FIRST-LOCATION-AND-EVERY-OTHER-LOCATION-TO-THE-UPPER-LIMIT, IT-THEN READS-ZEROS-FROM-THE-LOCATIONS-INTO-WHICH-IT DID-NOT-WRITE-1'S. IT-THEN-BUMPS-THE-LOCATIONS-LIMIT-BY-ONE-MEMORY-INCREMENT-(VALUE-VARIES-DEPENDING-UPON-THE-MEMORY). IT-CLEARS-MEMORY-UP-TO-THE-UPPER-LIMIT, IT-WRITES-1'S-INTO-THE-NEW-LOWER-LIMIT-AND-EVERY-OTHER-LOCATION-TO-THE-UPPER-LIMIT, IT-READS-ZEROS-FROM-THE-LOCATIONS-INTO-WHICH-IT-DID-NOT-WRITE-1'S, THREE-MEMORY-LOCATIONS-ARE-THE-MINIMUM-ON-WHICH-TEST-6 CAN-WORK:
 792
 793
 794
 795
 797
 798
 799
900
                                                                     1'S. THREE MEMOR'
TEST 6 CAN WORK:
80 i
892
803
                                                                    WRITE-1'S-INTO-LOCATIONS-0 AND-2
READ-ZEROS-FROM-LOCATION-1
804
885
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            807
                                                                                                                                           000000
            808
            809
                                                                                                                                           BUMP-LOWER-LIMIT-TO-1
CLEAR-LOCATIONS-1 AND-2-
WRITE-1'S-INTO-LOCATION-1
            810
            811
            812
                                                                                                                                           READ · ZEROS · FROM · LOCATION · 2
           814
815
                                                                                                                                           177777
177777
                                                                                                                                            000000
            817
            818
                                                                                                                          ***********
            819
                                                                                                                                           GHECK-EACH-NON-ZERO-TEST-6 ENTRY IN-THE-CURRENT-JUMP TABLE, FOR-EACH-NON-ZERO-ENTRY, SET-UP-IN-R4 THE-MEMORY-INCREMENT VALUE-X-2-(IE, THE-MINIMUM-SPREAD-FOR-TEST 6). BASIC VALUES:
            821
            822
            823
             824
            825
                                                                                                                                           FSA-A
                                                                                                                                           FSA-B.
            826
                                                                                                                                            INPUT
                                                                                                                                                                                                                                                                                                                      ....
                                                                                                                                           OUTPUT:
                                                                                                                                                                 2
            829
            830
                                                                                                                                                                                                                                                                                                                   47
                                                                                                                                           BTRANS
             832 - 004616
                                               005710
                                                                                                                    CHECK:
                                                                                                                                           TST
                                                                                                                                                                  (RØ)
                                                                                                                                                                                                                ;TEST 6 SELECTED FOR THIS MEMORY *
                       004620
004622
004626
                                                                                                                                                                                                                :NO, SKIP-CHECK-
:BYTE-TRANSLATOR
            833
                                               001414
                                                                                                                                           BEQ
                                                                                                                                                                  2$
             834
                                               022701
                                                                      000005
                                                                                                                                           CMP
                                                                                                                                                                  #5.R1
             835
                                               001003
                                                                                                                                           BNE
                                                                                                                                                                  1$
            836
                                                012704
                        004630
                                                                      000002
                                                                                                                                           MOV
                                                                                                                                                                  #2,R4
                                                                                                                                                                                                                ; VALUE · X 2
                                               000416
022701
             837
                        004634
                                                                                                                                           BR
                                                                                                                                                                  4$
             838
                       004636
                                                                      000004
                                                                                                                    1$:
                                                                                                                                           CMP
                                                                                                                                                                  #4.R1
                                                                                                                                                                                                                :OUTPUT BUFFER
             839
                        004642
                                               001003
                                                                                                                                           BNF
                                                                                                                                                                  2$
             840
                        004644
                                                012704
                                                                      000004
                                                                                                                                           MOV
                                                                                                                                                                  #4.R4
                                                                                                                                                                                                                ; VALUE · X 2
                       004650
004652
                                               000410
             841
                                                                                                                                           BR
                                                                                                                                                                  4$
                                                                                                                                           CMP
             842
                                                                      000003
                                                                                                                    2$:
                                                                                                                                                                  #3,R1
                                                                                                                                                                                                                ; INPUT BUFFER
             843
                                               001003
                        004656
                                                                                                                                           BNE
                                                                                                                                                                  3$
                        004660
                                                012704
                                                                      000004
                                                                                                                                           MOV
                                                                                                                                                                  #4.R4
                                                                                                                                                                                                                : VALUE · X 2 ·
             845
                       004664
                                               000402
                                                                                                                                           BR
                                                                                                                                                                  4$
                                                                      000002
             846
                        004666
                                               012704
                                                                                                                    3$:
                                                                                                                                           MOV
                                                                                                                                                                  #2,R4
                                                                                                                                                                                                                ; VALUE · X 2 · FOR · FSA'S ·
             847
             848
                                                                                                                                           USE - THE - PLACE-HOLDER - VALUE - AS - AN INDEX - INTO - THE - CURRENT
                                                                                                                                           LIMITS TABLE (AFTER SHIFTING FOR DOUBLE-WORD OFFSET). CHECK-THE RELATIONSHIP BETWEEN LOWER AND UPPER LIMITS.
             849
             850
             851
                                                                                                                                                                                                                                                                                                              THE STATE OF THE S
             852
                       004672
004674
                                               010103
                                                                                                                     4$:
                                                                                                                                           MOV-
                                                                                                                                                                  R1.R3
                                                                                                                                                                                                                 ;SHIFT: IN: ANOTHER: REG:
             853
                                               006303
                                                                                                                                           ASL:
                                                                                                                                                                  R3
                                                                                                                                                                  R3 ;SHIFT-FOR-DOUBLE-WORD-OFFSET-
CURLIM+2(R3),R4 ;GET-LOWER-LIMIT-+ MINIMUM-INCR-
CURLIM(R3),R4 ;IS-UPPER-LIMIT-OK FOR-TEST-6
             854
                        004676
                                               006303
                                                                                                                                           ASL
             855
                        004700
                                                                      0011521
                                               066304
                                                                                                                                           ADD:
                        004704
             856
                                               026304
                                                                      0011501
                                                                                                                                           CMP
             857
                        004710
                                                103026
                                                                                                                                           BHIS
                                                                                                                                                                                                                 :YES, CONTINUE
            858
                                                                                                                                           FAILED CHECK. CLEAR THE ENTRY IN THE CURRENT JUMP TABLE
AND REPORT TO THE CONSOLE RI - DIACE HOLDER WALLE THE
VALUE IS USED AS AN INDEX INTO A MARKE OF MEMORY NAMES
            859
            860
            861
                                                                                                                                                                                                                                                                                                                       he may to
            862
                                                                                                                                            (AFTER MULTIPLYING THE VALUE BY 6. THE LENGTH OF EACH
            863
                                                                                               Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
```

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TMT---
               20-M1110 27-MAR-80 15:38
                                          5:38 PAGE 14-2
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     864
     865 004712
                     005010
                                                               GLR
MOV
                                                                                              :CLEAR TEST 6 ADDRESS FROM CURRENT TABLE
                                                                          (RØ)
          004714
                     ð10046
                                                                         R0,-(SP)
R1,-(SP)
                                                                                              ;SAVE POINTER
     867
          004716
                     010146
                                                               MOV
                                                                                              :SAVE PLACE-HOLDER VALUE
:PRINT GENERAL ERROR MESSAGE
:LENGTH OF MEMORY NAMES
     868 004720
                     004767
                               004154
                                                                         PC.ERR12
     869
          004724
                     012700
                               000006
                                                               MOV
                                                                          #6.,R0
                                                                                              GET OFFSET INTO MEMORY NAME TABLE (ROXR!)

POINT TO MEMORY NAME TABLE

NUMBER OF CHARS IN NAME

POINT TO PRINT LINE
     870
          004730
                               000000G
                     004767
                                                               JSR.
                                                                         PC,$MUL.
#FTBL,R0
     871 004734
                     012700
                               001417
                                                               MOV
     872 004740
                    012701
012705
                               000006
                                                               MOV
     873
          004744
                               001465
                                                               MOV
                                                                         #PRINT, R5
     874
          004750
                                                    5$:
                                                               MOVB
                                                                          (R0)+,(R5)+
                                                                                               : MOVE · NAME · TO · PRINT · LINE
     875
          004752
                     005301
                                                               DEC
                                                                         R1
     876 004754
                     001375
                                                               BHE
     877
          004756
                     004767
                               003720
                                                               JSR
                                                                         PC,CONSOL
                                                                                              :WRITE · MEMORY · IN · ERROR
     878 004762
                     012601
                                                                         (SP)+,R1
(SP)+,R0
                                                               MOV
     879 004764
                     012600
                                                               MOV
     880
     881
                                                               PREPARE . TO . CHECK . NEXT . TEST . 6 ENTRY .
     883 004766
884 004770
885 004774
                     005201
                                                    6$:
                                                               INC
                                                                         Ri
                                                                                              #BUMP MEMORY PLACE-HOLDER VALUE POINT TO NEXT TEST 6 ADDRESS SUB-FROM LOOP COUNT
                     062700
                               000002
                                                               ADD
                                                                         #2.R0
                     005302
                                                               DEC:
                                                                         R2 -
     886
          004776
                                                               BNF
                                                                         CHECK -
     887
     888
     889
                                                              MAKE-SURE-THAT-THE- CURRENT JUMP TABLE: IS NOT EMPTY
     890
     891
     892 - 005000
                                                    CHECKØ:
          005000
                     012700
                               000730*
                                                              MOV.
                                                                         #MTSUB,R0
                                                                                              :POINT.TO.CURRENT.TABLE
     894 005004
                     012701
                               000110
                                                              MOV
                                                                         #(MEM*TESTS).R1 :NUMBER.OF.TABLE.ENTRIES
(R0)+ :IS.A.TABLE.ENTRY.PRESENT
LPRMPT :YES.EXIT.THIS.ROUTINE.,
     895 005010
                     005720
                                                               TST-
     896
          005012
                     881887
                                                               BHE
     897
          005014
                    005301
                                                               DEC
                                                                         R1
                                                                                              :SUB FROM ROUTINE COUNT.
     898
          005016
                     001374
                                                              BNF
                                                                         1 $
                                                                                               :TRY NEXT POSITION
                                                                                              EXECUTION IMPOSSIBLE
     899
          005020
                     004767
                               004060
                                                                         PC, ERR11
     900
                                                                                                             901
          005024
                                                              FXIT$S
          005024
                     012746
                                                              MOV.
                                                                          (PC)+,-(SP)
          005026
                     063
104377
                                   001
                                                                .BYTE
                                                                         51..1
          005030
                                                                         ↑0<377>
                                                               EMT.
```

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TMT------ MACRO - M1110 27-MAR-80 15:38 PAGE - 15
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     903
     904
                                                                  PROMPT FOR LOOP ON TEST
     906
907
     908
                                                                  RESPONSES:
                                                                                          CARRAIGE RETURN, LOOP ON TESTS.
     909
                                                                  <CR>
                                                                                        - YES, LOOP ON TESTS;
- NO. ONE MEMORY TEST CYCLE ONLY;
- NUMBER OF CYCLES TO EXECUTE;
     910
     911
     912
913
914 005032
                                                                  NUMERIC - VALUE -
                                                       I PRMPT:
     915
          005032
                      004767
                                                                             PC.LPTST
                                                                  JSR
                                                                                                   : PROMPT
     916
          005036
                      004767
                                 003232
                                                                  JSR
                                                                             PC.FIND
                                                                                                   :FIND RESPONSE IN COMMAND LINE.
     917 005042
918 005044
919 005052
                                                                                                   OK, RESPONSE FOUND:
CR-RESPONSE MEANS LOOP
                      103004
                                                                  BCC
                                                                             1$
                      052767
                                 000001
                                            172752
                                                                  BIS
                                                                             #LOOP, BASE
                      000442
                                                                  BR
                                                                             ERPRMT-
                                                                                                   ; AND . CONTINUE .
     920
                                                                                                   ;YES:- LOOP:ON:TESTS:: :TRY:'N'
:SET:FLAG:FOR:LOOP
:PROMPT:FOR:ERROR:OPTIONS:
:NO:- DO NOT LOOP ON TESTS
:NO: TEST:FOR:LOOP COUNT:
     921
           005054
                                                                  CMPB
                                 000131
                                                                             #1Yx(R1)
     922-005060
                     001004
052767
                                                                  BHE
                                                                             2$
                                                                             #LOOP,BASE
     923
          005062
                                 000001
                                           172734
                                                                  BIS
           005070
                      000433
                                                                             ERPRMT.
                                                                  BR
     925 005072
926 005076
                      122711
                                 000116
                                                                  CMPB
                                                                             #*H. (R1)
                      001004
                                                                  BNE
                                                                             3$
           005100
                      042767
                                 000001 - 172716
                                                                             #LOOP,BASE
                                                                                                   :CLEAR · LOOP · FLAG ·
                                                                  BIC
     928 005106
                      000424
                                                                             ERPRMT.
     929
     930
                                                                  ASSUME THAT THERE IS AN ASCII DECIMAL VALUE IN THE COMMAND LINE, CONVERT IT TO BINARY AND STORE,
                                                       ;
     931
     932
                                                                                                   :POINT: 1 PAST: STRING:
:BUMP: FOR: STUPID: SYSTEM: SUBRTN:
:SAVE: FOR: LATER: COMPARISON
:MOVE: POINTER: TO: R0 FOR: SYSTEM: SUBRTN:
     933 005110
                      969199
                                                       3$:
                                                                  {\tt ADD}
                                                                             R1.R0
      934 005112
                      005200
                                                                  INC
                                                                             RØ.
     935 005114
                      010046
                                                                  MOV
                                                                             R0,-(SP)
          005116
005120
      936
                      010100
                                                                  MOV.
                                                                             R1.R0
      937
                                 BBBBBBBB
                      004767
                                                                  JSR.
                                                                             PC, $CDTB
                                                                                                   CONVERT DECIMAL TO BINARY
           005124
                      020026
                                                                  CMP
                                                                             R0.(SP) +
                                                                                                   ;WHOLE STRING CONVERTED.
      939 005126
                      001403
                                                                                                   :YES, CONTINUE
                                                                  BEQ
                                                                             4$
      940 005130
                      004767
                                 003760
                                                                  JSR
                                                                             PC,ERR9
      941 005134
                      000736
                                                                  BR
                                                                             LPRMPT
                                                                                                   :PROMPT-AGAIN-
      942-005136
                      010167
                                 173022
                                                                  MOV
                                                       4$:
                                                                             R1,LOOPCT
                                                                                                   ;SAVE - LOOP - COUNT -
      943 005142
                                                                  BNE
                                                                             5$
      944 005144
                      004767
                                 003744
                                                                  JSR
                                                                             PC,ERR9
      945 005150
                      000730
                                                                  BR
      946 005152
                      052767
                                 000001
                                                                  BIS.
                                                                             #LOOP, BASE
                                            172644
                                                       5$:
                                                                                                   :SET-LOOP-FLAG
```

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                                  Approved For Release 2005/07/1 IA-RDP85-00514R000200020001-3
948
949
950
                                                    PROMPT FOR ERROR OPTIONS
951
952
                                                    RESPONSES:
                                                                        - CARRAIGE RETURN. DISPLAY ALL ERRORS.
954
                                                     <CR>>
                                                                       - HALT STOP TESTS AFTER IST ERROR.
- PRINT ONLY THIS NUMBER OF ERROR MESSAGES
BUT CONTINUE 1555.
- PRINT THIS NUMBER OF ERROR MESSAGES AND HALT.
955
                                                    н.
                                                    NUMERIC - VALUE -
956
957
958
                                                    N. VALUE . + H
959
960 005160
                                           ERPRMT:
961
    005160
              004767
                        003770
                                                     JSR
                                                              PC, EROPT
                                                                                  :PROMPT FOR OPTIONS
962-005164
              004767
                        003104
                                                              PC.FIND
                                                                                  :FIND RESPONSE
963
    005170
               103445
                                                     BCS.
                                                              MTSET -
                                                                                  :<CR> - DEFAULT-TO 'DISPLAY'
965
    005172
               122711
                                                     CMPB
                                                              #*H,(R1)
                                                                                  :HALT AFTER 1 ERROR
                                                                                 *NO ** FLAG · FOR · HALT · TO ** -
966
    005176
              001007
                                                     BHE .
                                                              1$
                                                              #HALT, BASE
                        000020
                                  172616
967
    005200
              052767
                                                     BIS
968 005206
              012767
                        000002:
                                 172600
                                                     MOV.
                                                              #2,ERLIM
                                                                                  :PRINT ONLY 1-ERROR MESSAGE
    005214
              000433
                                                              MTSET.
970
971
                                                     ASSUME AN ASCII DECIMAL VALUE IN THE COMMAND LINE. CONVERT
                                                     AND STORE.
973
974 005216
                                                                                 ;POINT:PAST:STRING IN:COMMAND:LINE
;BUMP:FOR:STUPID:SYSTEM:SUBRTN:
;SAVE:FOR:LATER:COMPARISON
              060100
                                           1$:
                                                     ADD
                                                              R1.R0
     005220
               005200
                                                     INC
                                                              RØ.
976
977
     005222
               010046
                                                              R0,-(SP)
     005224
              010100
                                                     MOV
                                                              R1,R0
                                                                                  ; PREPARE TO CONVERT
978
     005226
               004767
                        000000G
                                                              PC, $CDTB.
                                                     JSR
     005232
               020026
                                                     CMP
                                                              R0.(SP)+
                                                                                  :ENTIRE - STRING - CONVERTED -
980
     005234
               001403
                                                               2$
                                                                                  :YES-
981 005236
               004767
                        003646
                                                     JSR
                                                              PC.ERR10
982 - 005242 -
              000746
                                                     BR
                                                              ERPRMT.
                                                                                  :TRY-AGAIN-
983
                                                     LOOK-FOR-AND 'H' AFTER THE ASCII OCTAL VALUE.
984
985
                                                                                  :NUMBER OF ERROR MSGS 140 PRINT
:ADJUST FOR PRE-DECREMENT
    005244
                                                              R1.ERLIM
              010167
                        172544
172540.
                                                     MOV
986
987
     005250
               005267
                                                     INC
                                                              ERL IM-
                                                                                  SCAN COMMAND LINE
NOTHING ELSE THERE
               004767
988
     005254
                        003014
                                                     JSR
                                                               PC.FIND.
989 005260
               103411
                                                     BCS.
                                                              MTSET:
               122711
990
    005262
                                                     CMPB
                        000110
                                                               #*H<sub>x</sub>(R1)
                                                                                  \verb|:HALT-AFTER-MESSAGE-COUNT-EXHAUSTED-|
               001403
     005266
                                                     BEQ
                                                               4$
                                                                                  :YES-
                                                               PC.ERR10
992.005270
               ð04767
                        003614
                                                     JSR
                                                                                  :BAD OPTION
993 005274
               000731
                                                     BR
                                                              ERPRMT -
                                                                                  :TRY-AGAIN-
995 005276
               052767
                        000020
                                  172520
                                                     BIS.
                                                               #HALT, BASE
                                                                                  :SET-HALT-FLAG
```

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TMT----- MACRO-M1110 27-MAR-80 15:38 - PAGE-17
                                                  Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      997
      998
      999
                                                                         PREPARE . TO . ENTER . MAIN . LOOP .
     1000
     1001
                                                                         INITIALIZE CURRENT JUMP TABLE POINTER AND COUNTER ADJUST FOR PRE-DCREMENT OF COUNT, PRE-INCREMENT OF POINTER
     1992
     1003
     1004
                                                             MTSET:
     1005
            005304
                                                                                     #MTSUB-2,MTPNT ;SET.UP-POINTER-TO JUMP-TABLE-
#<TESTS*MEM>+1,MTCNT-;AND-NUMBER-OF-JUMP-TABLE-ENTRIES
     1006 005304
                        012767
                                    0007261
                                                172656
                                                                         MOV:
                        012767
                                     000111
                                                 172652
                                                                         MOV.
     1007
                                                                                                             :RESET TD
     1008 005320
                       012767
                                    000000
                                               176376
                                                                         MOV:
                                                                                     #0.TD$SU-
     1009
                                                                         THE STOP MESSAGE SAYS 'ENTER ANY CHARACTER TO STOP TEST(S)', ACTUALLY THE CHARACTERS W_{\star} P _{\star} C _{\star} AND T ARE SPECIAL IN THAT THEY ALLOW THE RUN TO CONTINUE AFTER THE PRINTING OUT OF STATUS INFORMATION. SEE THE ROUTINE 'AST'.
     1010
     1011
     1012
     1013
     1014
                                                                                     PC.BEGTST: :PUT OUT START TEST MESSAGE:
PC.STOP: :GIVE DIRECTIONS FOR STOPPING TEST
#10.ATA.*LUN:TT.,,,<#AST>
     1015 005326
1016 005332
                        994767
                                                                         JSR
                                    003536
                                                                         JSR
                                     003526
                        004767
            005336
005336
                                                                         QIO$S
CLR∙
                         005046
                                                                                     -(SP)
             005340
                                                                         CLR
                                                                                     -(SP)
                         005046
             005342
                         005046
                                                                         CLR
                                                                                     -(SP)
            005344
005346
005350
                                                                                                                                                                      : }
                                                                         CLR
CLR
                                                                                     -(SP)
                         005046
                                                                                      -(SP)
                         005046
                         012746
                                     0072061
                                                                         MOV
                                                                                      #AST,-(SP)
             005354
                                                                         CLR
                                                                                     -(SP)
                                                                                     -(SP)
             005356
                         005046
                                                                         CLR
                                                                                      -(SP)
                                                                         CLR
             005360
                         005046
                                                                                      #LUN.TT,-(SP)
#IO.ATA,-(SP)
             005362
                         012746
                                     000001
                                                                         MOV.
                                     000000G
             005366
                         012746
                                                                         MOV.
             005372
                         012746
                                                                         MOV.
                                                                                      (PC) +_* - (SP)
                             ййі
                                          014
                                                                                      1,12.
↑0<377>
             005374
                                                                          .BYTE
                         104377
             005376
```

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R0 M1110 27-MAR-80 15:38 PAGE 18 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
1019
1020
                                                              MAIN-LOOP-OF MEMORY-TEST-FUNCTION-
1021
1022
                                                              GHECK FOR THE HALT OPTION, IF THE OPTION IS
ON, CHECK TO SEE WHETHER ANY ERRORS HAVE OCCURRED.
1024
1025
                                                                  THEY HAVE (AND THE HALT COUNT IS EXHAUSTED),
1026
1027
                                                              TERMINATE . THE . TESTS .
1028
                                                   MTMAIN:
       005400
1029
                                                                                                ; HALT · AFTER · ERROR ·
                                                              BIT
                                                                         #HALT, BASE
      005400
                  032767
                             000020
1030
                                                                                                :NO:
1931
       005406
                  001413
                                                              BEO.
                                                                         15
                                        172496
                                                              BIT
                                                                          #ERROR, BASE
                                                                                                :HAS AN ERROR OCCURRED
                             999949
1032
      885418
                  032767
                                                                          1$
                                                                                                :NO:
                  001407
1033
      005416
                                                                                                : IS-REMAINING-PRINTOUT-COUNT
                             172370
                                        000001
                                                              CMP
                                                                         ERLIM,#1
1034
       005420
                  026727
                                                                                               ;NO. CONTINUE:
;PUT:OUT HALT:MESSAGE
1035
      005426
                  <u>авзавз</u>
                                                              BGT
                                                                          1$
                                                               JSR
                             003424
1936
      005430
                  994767
                                                              BR
                                                                          8$
                                                                                                : AND . EXIT
       005434
                  000464
1037
1038
                                                              FIND A NON-ZERO ENTRY IN THE 'CURRENT JUMP TABLE':
(A NON-ZERO ENTRY IS THE ADDRESS OF A TEST CONTROL ROUTINE). IF NO NON-ZERO ENTRIES ARE FOUND BEFORE THE END OF THE TABLE IS REACHED. THEN ONE MEMORY TEST CYCLE OR 'PASS' IS COMPLETE.
1039
1040
1041
1042
1043
1944
                                                                                                :POINT TO JUMP TABLE
:FIRST SUB FROM # RTNS LEFT
:ALL DONE, TEST LOOP FLAG:
:ADVANCE POINTER
:IS THERE AN ADDRESS IN THE TABLE
:NO. BUMP TO NEXT
                             172526
                                                    1$:
                                                              MOV.
                                                                          MTPNT,R1
1045
       005436
                  016701
       005442
                  005367
                                                               DEC
                                                                          MTCHT:
1046
                                                               BEQ
1047
       005446
                  001406
                                                                          3$
       005450
                                                               TST
                                                                          (R1) +
                  005721
1948
                                                                          (R1)
       005452
                  005711
                                                               TST
1049
       005454
                  001772
                                                               BEQ
                                                                          2$
 1050
                                                                                                SAVE JUMP TABLE ROINTER
                                                                          RI.MTPHT
 1051
       005456
                  010167
                              172586
                                                               MOV
1052 - 005462
                  000454
 1053
                                                               PASS · FINISHED
 1055
 1056
 1057
                                                               IF THE LOOP FLAGEIS NOTION, EXIT TMT. IF THE LOOP FLAGEIS ON AND THE LOOP COUNTIES
 1058
 1959
                                                               EXHAUSTED, EXIT TMT.
 1868
 1061
                                                                                                : IS-LOOP FLAG-ON-
                                                               BIT
                                                                          #LOOP, BASE
 1062
       005464
                  032767
                              000001 -- 172332 -
                                                                                                :NO. GET OUT.
:IS-LOOP COUNT-BEING-USED
       005472
                  001443
                                                               BEQ
 1863
       005474
                              172464
                                                                          LOOPET
 1064
                   005767
                                                                                                :NO. JUST-KEEP-LOOPING
:SUB-FROM-LOOP-COUNT-
                                                                          4$
       005500
                   001403
                                                               BEO.
                                                                          LOOPET
                                                               DEC
 1066
1067
       005502
                  005367
                              172456
                                                               BEQ
                                                                          7$
                                                                                                 :FINISHED
       005506
                  001435
 1068
                                                               IF ALL TESTS, PRINT 'END OF PASS NNNN'.
 1069
                                                               REINITIALIZE FOR NEXT PASS.
 ำครค
 1071
                                                               RIT
                                                                          #ALLTST,BASE
                                                                                                 :ALL TESTS
       005510
                   032767
                              000010.
                                       . 172306
                  001415
012702
                                                                          6$
 1073 005516
                                                               BEQ
                                                                           #ENDOF,R2
                                                                                                 :POINT.TO.MESSAGE.
:LENGTH.OF.MESSAGE
                              0033061
       005520
 1974
                   012703.
                              000014
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001.3
                                                               MOV-
                                                                          #ENDLH,R3
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TMT-----MACRO-M1110 27-MAR-80 15:38 PAGE-18-1
                                         Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
   1076 005530
                   012705
                             0014651
                                                            MOV.
                                                                      #PRINT, R5
                                                                                          :POINT.TO.PRINT.LINE
   1077
         005534
                    112225
                                                  5$:
                                                            MOVB
DEC:
                                                                                          : MOVE · MESSAGE · TO · PRINT LINE
                                                                      (R2)+,(R5)+
   1078
         005536
                    305303
                                                                      R3
         005540
005542
   1079
                   001375
                                                            BHE
                                                                      5$
                             002742
003130
   1080
                   004767
                                                            JSR
                                                                      PC,PASSC
                                                                                          ;ADD:#:PASSES TO:PRINT LINE
         005546
                   004767
   1081
                                                            JSR.
                                                                      PC.CONSOL
                                                                                          : PRINT - MESSAGE -
   1082
         005552
005560
   1883
                    062767
                              000001
                                                                      #1,PASS
                                       172402
                                                            ADD
                                                                                          COUNT NUMBER OF PASSES
CARRY TO HIGH WORD
SET POINTER TO CURRENT JUMP TABLE
   1084
                              172374 - 000726*
                   005567
                                                            ADC
                                                                      PASSH-
         005564
                   012767
   1085
                                       172376
                                                                      #MTSUB-2,MTPNT ;SET POINTER TO #<TESTS*MEM>+1,MTCNT ;SET COUNT
                                                            MOV:
   1086
         005572
                   012767
                              000111
                                       172372
                                                            MOV-
   1887
         005600
                   000677
                                                                                          : AND . ENTER . LOOP
    1088
   1089
   1090
                                                            EXIT:
   1091
    1092
    1093 005602
                                                                                     :MEMORY TEST(S)
                   004767
                                                  7$:
                                                                      PC, ENDTST
                              003246
                                                            JSR
    1094
         005606
                                                                                                                                   7
                                                  8$:
                                                            EXIT$S
          005606
                   012746
                                                            MOV.
                                                                                                                    *
          005610
                       063
                                 001
                                                             .BYTE
                                                                      51..1
          005612
                    104377
                                                            FMT.
                                                                      ◆0<377>
   1095
    1096
    1097
                                                            PREPARE TO JUMP TO MEMORY TEST CONTROL ROUTINES
    1098
    1099
    1100
                                                            THE QUOTIENT FROM THE DIVISION BELOW (IN RO) IS THE TEST
    1101
                                                            NUMBER IN ZERO-RELATIVE FORM: THE REMAINDER IS THE MEMORY
    1102
                                                            PLACE-HOLDER VALUE:
    1103
    1104
                                                                      FSA · A ·
    1105
                                                                      FSA · B ·
    1106
                                                            2
                                                                      FSA C
                                                                      INPUT BUFFER
    1107
    1108
                                                                      OUTPUT BUFFER
    i i 09
                                                                      BYTE TRANSLATOR
    1110
   1111
   1112-005614
                                                  JMPMT:
    1113
         005614
                    012700
                                                                      ##<TESTS*MEM>,RØ :TOTAL NUMBER OF ROUTINES
MTCNT,RØ :SUB + RTNS REMAINING TO BE EXECUTED
#MEM.Ri :PUT DIVISOR IN RI FOR SUBRIN
                              000110
                                                            MOV-
    1114
         005620
                    166700
                              172346
                                                            SUB
   1115
1116
         005624
005630
                   012701
004767
                              000006
                                                            MOV
                              000000G
                                                            JSR
                                                                      PC, $DIV
         005634
                   010100
                                                                                          SAVE TABLE POSITION IN WORD OFF SET FORM
                                                            MOV
                                                                      R1.R0
   1118
                                                            IF TEST-6 IS ABOUT TO BE EXECUTED SET UP THE MEMORY INCREMENT VALUE IN A FIELD THAT THE TEST-6 CONTROL ROUTINE CAN USE.
   1119
   1120
    1121
         005636
                    022700
                              000005
                                                            CMP
                                                                      #5.R0
                                                                                          QUOTIENT = Z-REL TEST NUMBER NOT TEST 6 THIS TIME TEST SHOWN TRANSPORT
         005642
005644
   1123
                    001050
                                                            BHE
                                                                      5$
   1124
                   822781
                             000005
                                                            CMF
                                                                      #5.R1
   1125 005650
                   001004
                                                            BNF
                                                                      1$
   1126
1127
         005652
                   012767
                             000001
                                                                      #1.T6FACT
                                                            MOV
                                                                                          SET-UP-MEMORY ANCREMENT
                                                                                                                                  . 13 2
         005660
                   000435
022701
                                                            BR
                                                                      4$
   1128 - 005662
                             000004
                                                  1$:
                                                            CMP
                                                                      #4.R1
                                                                                          :OUTPUT BUFFER
   1129 005666
                   001004
                                                            BNE
                                         Approved For Release 2005/07/12
                                                                               CIA-RDP85-00514R000200020001-3
```

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P0 M1110 27-MAR-80 15:38 PAGE 18-2.
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1130
      005670
                 012767
                            000002
                                      172132
                                                           MOV
                                                                     #2,T6FACT
                                                                                         ;SET.UP.MEMORY.INCREMENT
1131
      005676
                 000426
                                                           BR
                                                                     4$
1132
      005700
                 022701
                           000003
                                                           CMP
                                                                     #3.R1
                                                                                          : IMPUT BUFFER
1133
      005704
                 001007
                                                           BNE
                                                                     3$
      005706
                 012767
                           000002
                                      172114
                                                                     #2,T6FACT
                                                           MOV
                                                                                          :SET.UP.MEMORY.INCREMENT
1135
       005714
                 012767
                           000200
                                      176360
                                                                     #T$DISK.TD$CTW
                                                           MOV
                                                                                         :SIMULATE DISK
1136
      005722
005724
                 800445
                                                           BR
                                                                     LASTJ
                                                                                         JUMP TO ROUTINE SET UP MEMORY INCREMENT
1137
                 012767
012767
                           000001
                                      172076
                                                          MOV
                                                                     #1.T6FACT
                           020000
                                      176360
                                                           MOV
                                                                     #T$SCLK,TD$CTW
                                                                                          :START CLOCK
1139
      005740
                 010102
                                                          MOV.
                                                                     R1.R2.
                                                                                          COPY REMAINDER
1140
      005742
                 006302
                                                                     R2: ;SHIFT-FOR-WORD-OFFSET-
SETTBL(R2),TD$CTW-;SELECT-WHICH-FSA-
                                                          ASL
       005744
                           000174' 176360
                 016267
                                                          MOV
1142
      005752
                 000431
                                                          BR
                                                                     LASTJ.
                                                                                         JUMP TO RTH
1143
      005754
                 012767
                           000040
                                      17636A
                                                4$:
                                                          MOV
                                                                     #T$ICD,TD$CTW
                                                                                         :SET-DIAGNOSTIC-BIT
1144
      005762
                 000425
                                                          BR
                                                                     LASTJ.
1145
                                                                                         JUMP TO ROUTINE
 i i 46
       005764
                 822781
                           000003
                                                5$:
                                                          GMP
                                                                     #3,R1
                                                                                         : INPUT BUFFER
1147
       005770
                 001004
                                                          BNE
                                                                     6$
1148
      005772
                 012767
                           000200.
                                     176360
                                                          MOV
                                                                     #T$DISK,⊤D$CTW
                                                                                         ;SIMULATE DISK -
1149
      <u>ййбййй</u>
                 000416
                                                          BR
                                                                     LASTJ
1150
      006002
                 022701
                           000002
                                                          CMP
                                                                     #2,R1
                                                                                         ;2.IS.MAX.OFFSET.FOR.FSA'S
1151
      006006
                 002410
                                                          BLT.
                                                                     7$
                                                                                         : NOT - AN - FSA -
1152-006010
                 012767
                           020000
                                     176360
                                                          MOV.
                                                                     #T$SCLK,TD$CTW
                                                                                         :START CLOCK
1153
      006016
                 006301
                                                          ASL
                                                                    R1 :CONVERT TO WORD OFFSET SETTBL(R1), TD$CTW :SELECT WHICH FSA
      006020
                 016167
                           0001741
                                                          MOV
1155 006026
                 000404
                                                          BR
                                                                    LASTILL
                012767
1156
      006030
                                                          MOV #T$ICD, TD$CTW: ;SELECT DIAGNOSTIC BIT: #75 CD THE REMAINDER FROM THE ABOVE DIVISION (X4) A9 AN OFFSET INTO THE DOUBLE-WORD MEMORY LIMITS TABLE; MOVE THE CURRENT MEMORY LIMITS TO THE STACK.
                           000040
                                     176368
                                                7$:
1157
1158
1159
1160
1161
1162
                                                          LOAD RO WITH THE REMAINDER X2 (WORD OFFSET) FOR USE
1163
                                                          BY THE MEMORY TEST CONTROL ROUTINE.
1164
1165
      006036
                886381
                                                LASTIL
                                               LASTJ: ASL-
LASTJI: MOV-
                                                                                         :SHIFT-FOR-WORD-OFFSET
      006040
                010100
                                                                    R1 ;SHIFT:FUR:WURD-UFFSET:
R1.R0 ;LOAD-R0
R1 ;SHIFT:FOR:DBL:WORD-OFFSET:
CURLIM(R1),-(SP) ;MOVE MEMORY-END:ADDR:TO-STACK:
CURLIM+2(R1),-(SP) ;MOVE MEMORY START ADDRESS
1167
      006042
                006301
                                                          ASL
1168
      006044
                016146
                           0011501
                                                          MOV
1169
      006050
                016146
                           0011521
                                                          MOV.
1170
1171 006054
                016701
                                                          MOV-
                                                                    MTPHT.R1
                                                                                         :LOAD POINTER TO CONTROL RTH ADDR
1172-006060
                          000000
                000171
                                                          JMF
                                                                    @(R1)
                                                                                         ; JUMP . TO TEST . CONTROL . ROUTINE .
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TMT------MACRO-MillO 27-MAR-80 15:38 PAGE-19
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    1174
1175
1176
1177
                                                         ŝ
                                                                    MEMORY-TEST-CONTROL-ROUTINES-
    1178
1179
                                                                    TESTS ARE DESCRIBED FULLY IN THE SUB-MODULE TTEST
    1180
    1181
                                                                    TEST-01
    1182
    1183
    1184 006064
                                                         T1:
           006064
                       004770
                                  001214
                                                                                PC.@TiaDDR(R0)
                                                                    JSR
    1186 006070
                      000167
                                  000434
                                                                    JMP -
                                                                                MTJUMP
                                                                                                      : AND - RETURN - TO - LOOP
    1187
                                                        \sigma_{jk}^{2i}
    1188
    1189
                                                         ;
                                                                    TEST-02-
    1190
1191
1192-006074
                                                         Ť2:
    1193
           006074
                      005067
                                                                                                      SET TEST PATTERN TO ZERO
                                  173174
                                                                    CLR
                                                                                CKDATA
                      004770
    1194 006100
                                  0012001
                                                                    JSR
JMP
                                                                               PC.@STADDR(RØ)
MTJUMP
                                                                                                               ---
    1195
           006104
                      000167
                                  000420
    1197
1198
                                                                    TEST-03
    1199
    1200
    1201 006110
1202 006110
1203 006116
                                                         T3:
                      012767
004770
                                                                    MOV-
                                                                               #-1,CKDATA
PC,@STADDR(R0)
                                  0012001
                                                                    JS≅.
JMP:
    1204
           006122
                      000167
                                  000402
    1205
1206
1207
                                                                    TEST-04
    1208
    1209
    1210 006126
1211 006126
1212 006134
                      012767
004770
                                  125252: 173140
                                                                               #125252,CKDATA
PC,@STADDR(R0)
                                                                    MOV-
                                  001200'
                                                                    JSR
    1213 006140
                      000167
                                  000364
                                                                    JMP
                                                                               MTJUMP .
    1214
1215
1216
                                                                    TEST-05
    1217
1218
1219 006144
                                                         T5:
    1220
           006144
                      012767
                                  146314% 173122
                                                                    MOV
                                                                                #146314,CKDATA
    1220 000144
1221 006152
1222-006156
1223 006164
1224 006170
1225
1226
                      004770
                                  0012001
                                                                               PC.@STADDR(R0)
#031463.CKDATA
PC.@STADDR(R0)
                                                                    JSR-
                      012767
004770
                                  031463
001200*
                                             173110
                                                                    MOV.
                                                                    JSR -
                      000167
                                                                               MTJUMP .
   1227
1228
1229
                                                                    TEST-06
```

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; T6:

1230 006174

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231 232				;	€LR- JSR-	GKDATA∙ PC⊅@STADDR(RØ)	;SET-PATTERN-TO-ZERO-
233				•	JSR:	PC,@T6ADDR(R0)	
234				;	ADD -	T6FACT.(SP)	:PERFORM AT NEXT ADDRESS
235 236					CLR. JSR.	CKDATA:	RESET PATTERN TO ZERO
237				;	JSR:	PC.@STADDR(R0) PC.@T6ADDR(R0)	and a constitution of the second of the seco
238				;	SUB	T6FACT, (SP)	RESTORE ORIGINAL LOWER LIMIT
239 006174 240	000167	000330			JMP.	MTJUMP.	RETURN TO TOP OF MT COMMAND LO
241				;	•		
242 · 243				;	TEST-07		
243 244							
245 006200				Ϋ́77∶			
246 006200	004770	0012301		•	JSR∙	PC.@T7ADDR(R0)	,
247 006204 248	000167	000320			JMP.	MTJUMP.	RETURN TO TOP OF MT COMMAND LO
249				;			
250 251				:	TEST-08		
252 -				:			
253 006210				Ť8∶		•	
254 006210 255 006216	012767 004770	000377 001200	173056		MOV.	#377.CKDATA	:SET.TEST.PATTERN.=.X:00FF:
256 006222	012767	177400	173044		JSR∙ MOV∙	PC,@STADDR(R0) #177400,CKDATA	:SET.TEST.PATTERN.=.X*FF00*
257 006230 258 006234	004770 000167	001200° 000270			JSR.	PC,@STADDR(R0)	
259	000101	000210		;	JMP.	MTJUMP.	RETURN TO TOP OF MT COMMAND LO
260 261				7			
:61 :62					TEST-09		
263							
264 006240 265 006240	012767	000001	.177006	T9:			
266 006246	004770	000001 0012001	113026	15:	MOV∙ JSR∙	#1.CKDATA PC.@STADDR(R0)	:START-TEST-PATTERN-AT-1
67 006252	016702	173016			MOV.	CKDATA,R2	;LOAD·FOR·SHIFT
268 006256 269 006260	006302. 010267	173010			ASL: MOV:	R2	:SHIFT A BIT
70 006264	005702	113010			TST	R2.CKDATA R2.	:NEXT TEST:PATTERN :FINISHED:?:
71 006266	001367	000074			BHE ·	1\$	
:72 · 006270 :73	000167	000234:		:	JMP∙	· AMULTM	;RETURN.TO.LOOP.
:74				;			· contract - legs
!75 !76		•			TEST-10		* <u></u>
77				;			
78 006274				T10:			
!79 !80				;	MOV∙ JSR∙	MT10,CKDATA	:USER · PATTERN ·
81 006274	000167	000230:			JMP.	PC.@STADDR(R0) '	RETURN TO TOP OF MT COMMENDE OF
82 83				:			
84					TEST-11		
85				:	1001.11		

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TMT---- MACRO M1110 27-MAR-80 15:38 PAGE_19-2
                                       Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
   1288
         006300
                  012767
                            1000015 172766
0012004
                                                        MOV
                                                                  #100001.CKDATA
   1289
         006306
                  004770
                                                         JSR
                                                                  PC.@STADDR(R0)
   1290 006312
                  012767
                            040002
                                     172754
                                                        MOV
                                                                  #040002,CKDATA
   1291 006320
                  004770
                            0012001
                                                         JSR.
                                                                  PC.@STADDR(R0)
         006324
                  012767
                            020004
                                                        MOV
                                                                  #020004.CKDATA
   1293
         006332
                  004770
                            001200
                                                         JSR
                                                                  PC.@STADDR(R0)
   1294 006336
1295 006344
                  012767
                            001010
                                     172730
                                                        MOV
                                                                  #001010,CKDATA
         006344
                  004770
                                                         JSR.
                                                                  PC.@STADDR(R0)
   1296
         006350
                  012767
                            คิศิสติวติ
                                     172716
                                                        MOV
                                                                  #004020,CKDATA
PC,@STADDR(R0)
#002040,CKDATA
    1297
         006356
                  004770
                            001200
   1298
1299
        .006362
                  012767
                            002040
                                     172704
                                                        MOV
         006370
                  004770
                            0012001
                                                        JSP.
                                                                  PC.@STADDR(R0)
   1300
        006374
                  012767
                            001100
                                                        MOV
                                                                  #001100.CKDATA
   1301 006402
                  004770
                                                                  PC.@STADDR(R0)
#000600.CKDATA
                            00120A
                                                         JSR
   1302-006406
                  012767
                            000600
                                     :172668
                                                        MOV
   1303 006414
                  004770
                            001200'
                                                        JSP.
                                                                  PC.@STADDR(R0)
   1304
        006420
                  000167
                            000104
                                                        JMP
                                                                  MTJUMP .
   1305
   1306
1307
                                                        TEST-12-
   1308
   1309
   1310
1311
        006424
                                               T12:
        006424
                  005067
                            172644
                                                        CLR.
JSR.
                                                                  CKDATA
                                                                                     : SET TEST PATTERN
   1312
        006430
                  004770
                           0012001
                                                                 PC.@STADDR(R0)
CK2
   1313
        006434
                  005067
                            172636
                  012767
   1314
        006440
                                                                 #+1,CK3
PC,@TCDADD(R0)
                                     172632
                                                        MOV
   1315
        006446
                  004770
012767
                            001244
                                                        JSR.
   1316
        006452
                            177777°
172614
                                     172616
                                                        MOV
                                                                  #-1.CK2
                                                                                     :READ PATTERN
   1317
        006460
                  005067
                                                                  CK3
                                                                                     :WRITE PATTERN
   1318
        006464
                  004770
                            001244°
                                                        JSR
                                                                  PC.@TCDADD(R0)
   1319
   1320
        006470
                  005067
                            172602
                                                        GLR
                                                                  CK2.
                                                                                     :READ PATTERN
   1321
        006474
                  012767
                            177777
                                     172576
                                                        MOV.
                                                                  #-1,CK3
                                                                                     :WRITE PATTERN
   1322
        006502
                  004770
                            001260'
                                                        JSR
                                                                  PC.@TCUADD(R0)
   1323
        006506
                  012767
                                     172562
                                                                                     :READ.
                                                        MOV
                                                                  #-1.CK2
        006514
                  005067
                            17256A
                                                        CLR
                                                                 CK3
                                                                                     : URITE
   1325
        006520
                  004770
                           BB 126B
                                                        JSR
                                                                 PC.@TCUADD(R0)
   1326
1327
        006524
                  000167
                           000000
                                                        .TMP
                                                                 MTJUMP.
   1328
                  062706
   1329
        006530
                           000004
                                                        ADD
                                                                  #4,SP
                                                                                    ;RESTORE SP
;AND RETURN
   1330
        006534
                  000167
                                                        JMP
                                                                 MTMAIN-
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R0 M1110 27-MAR-80 15:38 PAGE 20 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
1332
 1333
1334
                                                              MEMORY-TEST-ERROR-ROUTINE....... 💂 🔩 🖈 💥 🤄
1335
1336
      006540
1338 006540
                                                              SAVE
                                                                         R0.R1.R2,R3,R4,R5
       йй654й
                  010046
                                                              MOV.
                                                                         R0.-(SP)
R1.-(SP)
       006542
                  010146
                                                              MOV.
       006544
                  010246
                                                              MOV
                                                                         R2,-(SP)
       006546
006550
                  010346
                                                              MOV.
                                                                         R3,-(SP)
                                                                                                                          . F. 1907
                 010446
                                                              MOV.
                                                                         R4_* - (SP)
       006552 010546
                                                                         R5,-(SP)
1339
1340
                                                             SET-FLAG FOR ERROR-ENCOUNTERED. AN ERROR-MESSAGE-LIMIT-COUNT-OF-ZERO MEANS-THAT-THE COUNT-IS-NOT-BEING-USED. A.COUNT-OF--1 MEANS-THAT-THE-LIMIT-HAS-BEEN-REACHED (NO-MORE-ERROR-MESSAGES-ARE-TO-BE-PRINTED).
1341
1342
1343
 1344
1345
      006554
006562
                  052767
                             000040
                                      171242
                                                              BIS.
                                                                         #ERROR,BASE.
                                                                                              ;SET-FLAG-FOR-ERROR-ENCOUNTERED
1346
                  005767
                                                              TST.
                                                                         ERLIM-
1347
       006566
                  001412
                                                              BEQ.
                                                                         2$
1348
      006570
                  003002
                                                              BGT-
                                                                         1$
1349
      006572
                  000167
                             000372
1350
1351
                                                              DECREMENT ERROR LIMIT COUNT: IF IT GOES ZERO HERE, SET
                                                              NO MORE ERROR MESSAGES.
1353
                                                              IT TO -1.
1354
1355
      006576
006602
                  005367
                                                              DEC -
                                                   1$:
                                                                        ERL IM-
1356
                 001004
                                                              BHE .
                                                                         2$
       006604
                  005367
                             171204
                                                                         ERL IM-
1358
      006610
                 000167
                            000354.
                                                              JMP
                                                                        ERRORX.
1359
1369
1361
                                                             DERIVE TEST NUMBER FROM THE ADDRESS POSITION OF THE CURRENT MEMORY TEST CONTROL ROUTINE IN THE CURRENT JUMP TABLE.
1362
1363
                                                             GET-THE-OFFSET-FROM-THE-BEGINNING-OF-THE-TABLE. DIVIDE-
BY THE-NUMBER-OF-MEMORIES-IN-THE TABLE. THE-QUOTIENT
IS THE-TEST-NUMBER-(ZERO-RELATIVE). THE-REMAINDER-IS THEMORY-PLACE-HOLDER-VALUE. SAVE-IT.
1364
1365
1366
1367
1368
                                                                        1369
      006614
                 012700
                            000110
                                                   2$:
1370
1371
      006620
                  166700
                             171346
                                                             SUB
MOV
      006624
                 012701
                             000006
                 004767
      006630
                            000000G
                                                              JSR
1373
      006634
                                                             MOV.
1374 006636
                 010001
                                                             MOV
      006640
                 005201
                                                              INC
                 012700
912702
1376
1377
      006642
                            0013161
                                                             MOV
      886646
                            000001
                                                             MOV
      006652
                 004767
                            000000G-
                                                             JSR
                 012705
012700
1380 006656
                            0014651
                                                             MOV
                                                                                              :POINT.AT.PRINT.LINE.
:POINT.AT.TEST.T
:NUMBER.OF.BYTES.IN.S
                                                                        #PRINT, R5
1381 006662
                            001323*
                                                             MOV.
                                                                        #TMSG,R0
1382-006666
                 012701
                            000005
                                                             MOV-
                                                                        #5,R1
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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    1383 006672
                   112025
                                               3$:
                                                         MOVB
                                                                   (R0)+,(R5)+
                                                                                      :MOVE · LABEL · TO · PRINT · LINE
                   205301
    1384
         006674
                                                         DEC
                                                                   R1
    1385
         006676
                   301375
                                                         BNE
                                                                   3$
         006700
    1387
                   116725
                            172415
                                                         MOVB
                                                                   ASWRK+3,(R5)+
                                                                                      :MOVE-A-DIGIT OF-TEST NUMBER
         006704
006710
                   116725
    1388
                            172412
                                                         MOVB
                                                                   ASWRK+4,(R5)+
    1389
                   062705
                            999992
                                                         ADD:
                                                                   #2.R5
                                                                                      :BUMP · PRINT · LINE · POINTER
    1390
    1391
                                                         MOVE PASS COUNT TO PRINT LINE.
    1392
    1393
         006714
                   012700
                            0013301
                                                         MOV.
                                                                   #PMSG,RØ
                                                                                      ;POINT-AT-'PASS-';NUMBER-OF-BYTES-IN-STRING
    1394
         006720
                   012701
                             000005
                                                         MOV
                                                                   #5,R1
    1395
         006724
                   112025
                                                4$:
                                                         MOVB
                                                                   (R0) + (R5) +
                                                                                      : MOVE · LABEL · TO · PRINT · LINE ·
         006726
                   00530i
                                                         DEC:
                                                                   R1
    1397
         006730
                   001375
                                                         BNE
                                                                   4$
    1398
         006732
                   004767
                            001552
                                                         JSR.
                                                                   PC,PASSC
                                                                                      CONVERT NUMBER OF PASSES
    1399
         006736
                   062705
                            АВВАВАЗ
                                                         ADD.
                                                                   #3,R5
                                                                                      :BUMP · POINTER
    1400
    1401
                                                         REPORT 'FAILING MEMORY'
    1402
    1403 006742
                   012700
                            0013351
                                                                                      :POINT.AT.STRING.
:LENGTH.OF.STRING
                                                         MOV.
                                                                   #FMSG,R0
    1404
         006746
                   012701
                            000020
                                                         MOV.
                                                                   #16..R1
         006752
006754
    1405
                   112025
                                                         MOVB
                                                                   (R0) + (R5) +
                                               5$:
                                                                                      :MOVE · LABEL · TO · PRINT · LINE
    1496
                   005301
                                                         DEC.
                                                                   R1
                                                                                                                            17/17.
178. 7
    1407
         006756
                   001375
                                                         BNE
    1408
    1409
                                                         USE THE REMAINDER FROM THE ABOVE DIVISION AS AN INDEX.
    1410
                                                         INTO A TABLE OF MEMORY NAMES (= 6 BYTES EACH).
    1411
    1412 - 006760
                   012601
                                                         MOV
                                                                   (SP)+R1
                                                                                      :LOAD-REMAINDER-FROM-DIVISION-ABOVE
         006762
006766
    1413
                   012700
                             папапа 6
                                                         MOV.
                                                                   #6.R0
                                                                                      :SYSTEM SUBRIN EXPECTS MULTIPLIER IN RO
                   004767
    1414
                             ийийийи G
                                                         JSR.
                                                                   PC,$MUL
                   012700
                                                                                      :POINT:TO:TABLE:OF MEMORY:NAMES:
:POINT:TO:THE:ONE:THAT:FAHLED:
:NUMBER:OF:CHARS:IN:NAME:
    1415
         006772
                             001417
                                                         MOV.
                                                                   #FTBL,R0
    1416
         006776
                   060100
                                                         ADD
                                                                   R1,R0
    1417
         007000
                   012701
                             000006
                                                         MOV
                                                                   #6.R1
         007004
    1418
                   112025
                                                         MOVB
DEC+
                                                                   (R0) + . (R5) +
                                                                                      : MOVE · NAME · TO · PRINT · LINE
                                                6$:
    1419 007006
                   005301
                                                                   R1
    1420
         007010
                   001375
                                                         BHE
                                                                   6$
    1421 007012
                   004767
                             001664
                                                         JSR.
                                                                   PC.CONSOL
                                                                                      ;WRITE:ONE:LINE:TO CONSOLE
    1422
    1423
                                                         LINE 2
    1424
                                                         ADDRESS OF ERROR, EXPECTED PATTERN, RECEIVED PATTERN
    1425
         007016
                             001465:
001355:
    1426
                   012705
                                                         MOV-
                                                                   #PRINT, RS
                                                                                      :POINT TO PRINT LINE : POINT TO 'ADDRESS'
          007022
                   012700
    1427
                                                         MOV
                                                                   #AMSG,R0
    1428
         007026
007032
                   012701
                             000011
                                                         MOV.
                                                                                      :LOAD LENGTH OF STRING
                                                                   #9.,R1
    1429
                   112025
                                                7$:
                                                         MOVB
                                                                   (R0) + (R5) +
                                                                                      :MOVE-LABEL
         007034
                   005301
    1430
                                                         DEC
                                                                   R1
    1431
         007036
                   001375
                                                         BHE
                                                                   7$
    1432
                   016701
004767
    1433 007040
                             172240
                                                         MOV.
                                                                   ERRADD, R1
                                                                                      ;LOAD · ERROR · ADDRESS
         007044
    1434
                                                         JER -
                            001404
                                                                   PC.UNPK
                                                                                      ; CONVERT TO PBINTABLE CHARS
    1435
         007050
                                                         CHI
                   005205
                                                                                      :BUMP · PRINT · LINÉ · POINTER ·
    1436
                                                                                      POINT TO EXPECTED
                                                                   #EMSG,R0
    1437
         007052
                   012700
                            0013661
                                                         MOV
         007056
    1438
                   012701
                                                                                      ;LOAD NUMBER OF CHARS
                            000012
                                                         MOV
                                                                   #10.,R1
    1439
         007062
                   112025
                                                         MOVB
                                                                             5) +
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                                      Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
1440 007064
                305301
                                                         DEC ----
                                                                   R1
1441 007066
                001375
                                                         BNE
                                                                    8$
1442
1443
      007070
                016701
                           1722007
                                                                                        :LOAD-MEMMORY-TEST PATTERN
                                                         MOV:
                                                                    CKDATA,R1
1444 007074
                004767
                          001354
                                                         JSR.
                                                                   PC. UNPK
                                                                                        :CONVERT
1445
      007100
                005205
                                                         INC
                                                                                        ;BUMP PRINT LINE POINTER -
1446
1447
                012700
                          0014001
                                                         MOV
                                                                    #RMSG,RØ
                                                                                        :POINT-TO-*RECEIVED-*
1448 007106
1449 007112
1450 007114
                912701
                           000012
                                                         MOV.
                                                                   #10.,R1
(R0)+,(R5)+
                                                                                        :LOAD · NUMBER · OF · CHARS
                112025
005301
                                               9$:
                                                         MOVB
                                                                                        : MOVE - LABEL -
                                                         DEC.
1451
      007116
                001375
                                                         BNE
1452
                                                         COUNT OF NUMBER OF WORDS TO PRINT = 0 SIGNALS THAT
1453
                                               į
1454
                                                         THE RESULTS OF SEVERAL MEMORY READS WERE UNPREDICTABLE:
1455
                                                         PRINT * * *
1456
      007120
007124
007126
1457
                016700
                                                         MOV-
                                                                   ERRCT, RØ
                                                                                        :LOAD · NUMBER · OF · WORDS · TO · CONVERT
1458
                003010
012700
                                                         BGT.
                                                                    11$
                                                                                        :PRINT-WORDS-
1459
                          0014121
                                                         MOV.
                                                                    #UNMSG,RØ
                                                                                        :* * *
1460
      007132
                012701
                          000005:
                                                                   #5,R1
(R0)+,(R5)+
                                                         MOV.
                                                                                        :LENGTH OF MESSAGE
1461 007136
1462-007140
1463 007142
                 112025
                                               10$:
                                                         MOVB
                005301
001375
                                                                    R1
                                                         BNE.
                                                                    10$
1464 007144
                000407
                                                                    13$
1465
1466 007146
                012702.
                          0013101
                                               11$:
                                                         MOV.
                                                                    #ERW1,R2.
                                                                                        ;POINT.TO.FIRST.OF THEM:
;LOAD.THE.WORD.ITSELF.
1466 007146
1467 007152
1468 007154
1469 007160
1470 007162
                012201
                                               12$:
                                                         MOV-
                                                                    (R2) + .R1
                004767
                                                         JSR -
                                                                   PC . UNPK .
                005300
                                                         DEC.
                                                                   RЯ
                001373
                                                                   12$
1471
1472-007164
                004767
                          001512
                                               13$:
                                                         ISP.
                                                                   PC,CONSOL.
                                                                                        :ELSE-WRITE-TO-CONSOLE-
1473
1474 007170
                                               ERRORX:
1475
      007170
                                                         RESTOR MOV-
                                                                   R0,R1,R2,R3,R4,R5
      007170
007172
                012605
                                                                    (SP)+,R5
(SP)+,R4
                012604
012603
                                                         MÖV.
      007174
                                                         MOV:
                                                                    (SP)+,R3
      007176
007200
007202
                012602
                                                         MOV.
                                                                   (SP)+,R2
(SP)+,R1
                012601
                                                         MÖV.
                012600
                                                         MOV-
                                                                    (SP)+,R0
1476 007204
                                                         RTS.
                                                                   PC:
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                                                   Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    1478
    1479
    1480
                                                                          AST-
    1481
    i 482
                                                                          INTERCEPT CHARACTER FROM CONSOLE.
ON 'W' PRINT TEST NUMBER, PASS COUNT, MEMORY NAME, ADDRESS, AND TEST PATTERN.
     1483
    1484
                                                                          HND-1EST-PHITERN.
ON 'C' PRINT TEST-PATTERN-('CKDATA').
ON 'P' PRINT NUMBER OF PASSES.
ON 'T' PRINT TEST-NUMBER.
ON ALL-OTHERS-EXIT-TMT.
    1485
    1486
    1487
    1488
    1489
    1490
    1491
           007206
                                                             AST:
    1492-007206
1493-007212
                                                                                      (SP)+.ASTWRD: ;
R0.R1.R2.R3.R4.R5
                                                                          MOV-
                                                                                                               :GET-CHAR
                                                                          SAVE
            007212
                        010046
                                                                          MOV.
                                                                                      R0,-(SP)
R1,-(SP)
            007214
                        010146
                                                                          MOV.
            007216
007220
                        010246
010346
                                                                                       R2,-(SP)
                                                                          MOV.
                                                                          MOV.
                                                                                       R3,-(SP)
            007222
                        010446
                                                                          MOV.
                                                                                      R4,-(SP)
R5,-(SP)
            007224
                        010546
                                                                                                                                                                 1.
    1494
    1495 007226
1496 007234
                        122767
                                     0001207 170550
                                                                          CMPB
                                                                                       #PP.ASTWRD
                                                                                                               ;PRINT-NUMBER-OF-PASSES-AND-CONTINUE \%
                        001002
                                                                          BNE .
                                                                                       1:5
    1497
           007236
                        000167
                                                                                      PĀST
                                                                          JMP
           007242
007250
007252
    1498
                        122767
001002
                                     000103: 170534
                                                                          CMPB -
                                                                                       # C. ASTWRD
                                                                                                               :PRINT.OUT.TEST.PATTERN.,
    1499
                                                                          BNE
                                                                                       2$
    1500
                        000167
                                     000202:--
                                                                          JMP.
                                                                                      CAST
    1501 007256
1502 007264
                         122767
                                     000124: 170520
                                                                          CMPR
                                                                                       #1T,ASTWRD
                                                                                                               :PRINT-OUT-TEST-NUMBER
                        001002
                                                                          BNE -
                                                                                       3$
    1503
           007266
                        999167
122767
                                     0002107
                                                                          JMP .
                                                                                       TAST
    1504 007272
                                     0001277 170504
                                                                          CMPB -
                                                                                       # * W. ASTWRD
                                                                                                               :PRINT-WHERE
    1505 007300
                        001402
                                                                          BEQ.
                                                                                      MAST
    1506
           007302
                        000167
                                     000256.
                                                                                      EAST
    1507
    1508
    1509
                                                                          ROUTINE FOR 'W'
    1510
    1511
                                                                          DERIVE: TEST: NUMBER: FROM: THE: POSITION: OF: THE: CURRENT:
    1512
                                                                          MEMORY TEST CONTROL ROUTINE IN THE CURRENT JUMP TABLE.
    1513
                                                                          GET-THE-OFFSET-FROM-THE-BEGINNING-OF-THE-TABLE. DIVIDE-
BY THE-NUMBER-OF-MEMORIES-IN-THE TABLE. THE-QUOTIENT
IS THE-TEST-NUMBER-(ZERO-RELATIVE). THE-REMAINDER-IS THE-
MEMORY-PLACE-HOLDER-VALUE. SAVE-IT.
    1514
    1515
    1516
    1518
    1519
    1520 007306
1521 007306
                                                             WAST:
                                                                                      #<TESTS*MEM>,R0 ;LOAD-NUMBER-OF-TESTS-(TOTAL)
MTCNT,R0 ;SUB-CURRENT-ROUTINE-NUMBER-
#MEM,R1 ;SYSTEM SUBRTN-EXPECTS-DIVISOR-IN-R1
PC.$DIV- ;DIVIDEND-IS-IN-R1
R1.-(SP) ;TEMP SOVE-PENO-TESTS-(TOTAL)
R0.R1 ;PREPARE FOR CONVERSION DECIMAL
R1 ;ADJUST-ZERO-RELATIVE-NUMBER
**CONVENT_INTO LINDU ETELD
                        012700
                                     000110
                                                                          MOV
    1522-007312
                        166700
                                     170654.
                                                                          SUB .
    1523 007316
                        012701
                                     РИРИРИ
                                                                          MOV.
    1524 007322
                        004767
                                     000000G
                                                                          JSR
    1525 007326
1526 007330
                        010146
                                                                          MOV
                        010001
                                                                          MOV
    1527
           007332
                        005201
                                                                          INC
    1528
                        012700
                                    001316
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TMT---
                                                                                                                                                                                            SUPPLY LEADING ZEROS CONVERT BINARY TO DECIMAL.
        1529 007340
                                         012702 000001
                                                                                                                              MOV-
        1530 007344 004767
                                                              000000G
                                                                                                                              JSR.
                                                                                                                                                   PC,$CBDSG.
        1531
                                                                                                                                                                                                     THE PARTY OF THE P
        1532
                                                                                                                              TEST-NUMBER
        1533
                                                                                                                                                                                            :R5 -> PRINT LINE :MOVE 1 DIGIT OF TEST NUMBER
        1534 007350
                                         012705
                                                              0014651
                                                                                                                              MOV.
                                                                                                                                                   #PRINT,R5
                   007354
                                         116725
                                                               171741
                                                                                                                              MOVB
                                                                                                                                                   ASWRK+3,(R5)+
       1536
1537
                   007360
                                          116725
                                                                                                                              MOVB
                                                                                                                                                   ASWRK+4,(R5)+
                   007364
                                         005205
        1538
        1539
1540
                                                                                                                              PASS
        1541
                    007366
                                       004767
                                                              001116
                                                                                                                              JSR-
                                                                                                                                                   PC, PASSC.
                                                                                                                                                                                             :PRINT-OUT-PASS-NUMBER-
        1542 007372 005205
                                                                                                                              INC.
                                                                                                                                                                                             : BUMP · PRINT · LINE · POINTER ·
        1543
        1544
                                                                                                                             MEMORY.
        1545
       1546
1547
                                                                                                                             USE THE REMAINDER FROM THE ABOVE DIVISION AS AN INDEXINTO A TABLE OF MEMORY NAMES.
        1548
        1549 007374
1550 007376
                                         012601
                                                                                                         3$:
                                                                                                                              MOV.
                                                                                                                                                   (SP) + *R1
                                                                                                                                                                                             :LOAD REMAINDER FROM DIVISION ABOVE
                                         012700
004767
                                                              000006
                                                                                                                             MOV.
                                                                                                                                                  #6.R0
PC.$MUL
                                                                                                                                                                                             :SYSTEM SUBRIN EXPECTS MULTIPLIER IN RO
        155 i
                    007402
                                                              000000G:
001417
                                                                                                                              JSR-
        1552 007406
1553 007412
                                                                                                                                                                                            ;POINT: TO: TABLE: OF MEMORY: NAMES: ;POINT: TO: THE: ONE: THAT: FAHLED: ;NUMBER: OF: CHARS: IN: NAME: ;MOVE: NAME: TO: PRINT: LINE: ;
                                          012700
                                                                                                                                                   #FTBL,R0
                                                                                                                              MOV.
                                          060100
                                                                                                                              ADD.
                                                                                                                                                   R1.R0
       1553 007412
1554 007414
1555 007420
1556 007422
1557 007424
                                         012701
                                                              000006
                                                                                                                              MOV:
                                                                                                                                                   #6.R1
                                          112025
                                                                                                        4$:
                                                                                                                              MOVB
                                                                                                                                                   (R0)+,(R5)+
                                         005301
                                                                                                                              DEC -
                                                                                                                                                  R1
                                         001375
                                                                                                                             BNE
                                                                                                                                                   4$
        i558
                    007426
                                         005205
                                                                                                                              INC
                                                                                                                                                  R5
        1559
        1560
                                                                                                                             ADDRESS
        1561
        1562-007430
                                         016701
                                                              171646
                                                                                                                             MOV.
                                                                                                                                                  PREADD,R1
                                                                                                                                                                                            :LOAD ERROR ADDRESS ::CONVERT TO PBINTABLE CHARS
        1563 007434
                                         004767
                                                              001014:
                                                                                                                              JSR.
                                                                                                                                                  PC. UNPK
        1564 007440
                                         005205
                                                                                                                              INC:
                                                                                                                                                                                             :BUMP · PRINT · LINE · POINTER
        1565
        1566
                                                                                                                              TEST: PATTERN
        1567
                                                                                                                                                                                            :LOAD MEMMORY TEST PATTERN
                                                                                                                                                                                                                                                                             .::
        1568 007442
1569 007446
1570 007452
                                         016701
                                                               171626
                                                                                                                             MOV
                                                                                                                                                  CKDATA,R1
                                         004767
004767
                                                              001002
                                                                                                                              JSR.
                                                                                                                                                                                            CONVERT
ELSE-WRITE-TO-CONSOLE-
                                                                                                                                                  PC.UNPK
PC.CONSOL
                                                              001224.
                                                                                                                              JSR
        1571
                   007456
                                        000475
                                                                                                                             BR
                                                                                                                                                  REST
                                                                                                                                                                                            :EXIT AST
       1572
1573
1574
                                                                                                                             PRINT TEST PATTERN ALONE
        1575
        1576
        1577 007460
                                                                                                        CAST:
                                        012705
016701
        1578 007460
                                                              0014651
                                                                                                                             MOV-
                                                                                                                                                   #PRINT, R5
        1579 007464
                                                              171604.
                                                                                                                            MOV:
JSR:
                                                                                                                                                                                            :LOAD.TEST.PATTERN
:CONVERT_TO.ASCII.
                                                                                                                                                  CKDATA,R1
       1580 007470
1581 007474
                                        004767
004767
                                                              000760. :
                                                                                                                                                 PC.UNPK.
PC.CONSOL.
REST
                                                              001202
                                                                                                                             JSR
                                                                                                                                                                                            :WRITE-TO-TT0
       1582 007500
                                        000464
                                                                                                                             BR
       1583
1584
       1585
                                                                                      PRINT-OUT-TEST-NUMBER-ALONE
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16.73× 17.2.

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                                                                                           Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
        1586
        1587
                                                                                                                                    DERIVE TEST NUMBER FROM THE POSITION OF THE CURRENT MEMORY TEST CONTROL ROUTINE IN THE CURRENT JUMP TABLE.
        1588
         1589
        1590
        1591
                                                                                                                                    GET.THE.OFFSET.FROM.THE.BEGINNING.OF.THE.TABLE. DIVIDE
BY THE.NUMBER.OF.MEMORIES.IN.THE TABLE. THE.QUOTIENT
IS THE.TEST.NUMBER.(ZERO-RELATIVE).
         1592
         1593
        1594
        1595
         1596
                     007502
                                                                                                               TAST:
                     007502
007506
         1597
                                            012700
                                                                  000110:
                                                                                                                                                           #<TESTS*MEM>.R0 ;LOAD NUMBER OF TESTS (TOTAL)
MTCNT.R0 ;SUB-CURRENT ROUTINE NUMBER
                                                                                                                                    MOV.
        1598
                                            166700
                                                                                                                                     SUB-
                                                                                                                                                                                                      SOB-CORKENT ROUTINE NUMBER:
SYSTEM SUBRTN EXPECTS DIVISOR IN R1
DIVIDEND IS IN R1
PREPARE FOR CONVERSION TO DECIMAL
ADJUST ZERO RELATIVE NUMBER
CONVERT INTO WORK—FIEL DAMAGE
SUPPLY LEADING ZEROS
CONVERT BINARY TO DECIMAL
        1599
                     007512
                                           012701
                                                                  000006
                                                                                                                                     MOV.
                                                                                                                                                           #MEM.R1
         1600
                     007516
                                            004767
                                                                  000000G
                                                                                                                                     JSR
                                                                                                                                                           PC.$DIV
         1601
                      007522
                                            010001
                                                                                                                                     MOV
                                                                                                                                                           R0.R1
                     007524
        1692
                                            005201
                                                                                                                                     INC
                                                                                                                                                           R1
        1603 007526
                                           012700
012702
                                                                                                                                                          #ASWRK,R0
                                                                  0013163
                                                                                                                                     MOV.
        1604
                     007532
                                                                                                                                                                                                                                                                                            不能性 似色光谱
                                                                  000001:
                                                                                                                                    MOV-
                                                                                                                                                           #1,R2
         1605
                     007536
                                                                  000000G
                                           004767
                                                                                                                                     JSR -
                                                                                                                                                           PC, $CBDSG
        1606
                     007542
                                            012705
        1607
                                                                  0014651
                                                                                                                                                                                                      ;R5 -> PRINT LINE:
;MOVE-1 DIGIT OF-TEST NUMBER
                                                                                                                                     MOV:
                                                                                                                                                           #PRINT, R5
        1608 007546
1609 007552
1610 007556
                                                                  171547
                                           116725
116725
                                                                                                                                                          ASWRK+3,(R5)+
ASWRK+4,(R5)+
                                                                                                                                    MCVB
MOVB
                                                                  171544.
                                            994767
                                                                 001120
                                                                                                                                     JSR
                                                                                                                                                           PC, CONSOL.
                     007562
                                           000433
                                                                                                                                    BR
                                                                                                                                                           REST
        1612
1613
1614
        1615
                                                                                                                                    EXIT-PROGRAM
        1616
        1617
                                                                                                                                    IF THE 'ALL TESTS, ALL MEMORIES, FULL RANGE' OPTION IS IN EFFECT, THE PASS NUMBER FOR THE PREVIOUS PASS HAS ALREADY BEEN PRINTED OUT (SEE 'MTMAIN').
        1618
        1619
        1620
        1622 - 007564
                                                                                                              EAST:
        1623 007564
                                          004767
032767
                                                                 001270
                                                                                                                                     JSR
                                                                                                                                                          PC, HLTTST-
                                                                                                                                                                                                      ;WRITE HALT MESSAGE ;ALL TESTS ??
        1624 007570
                                                                 000010 170226
                                                                                                                                    BIT.
                                                                                                                                                           #ALLTST, BASE
                                           001025
                                                                                                                                    BNE
                                                                                                                                                          REST
        1626
        1627
        1628
                                                                                                                                    PRINT-NUMBER OF-PASSES ALONE-
        1629
        1630
        1631 007600
                                                                                                              PAST:
                     007600
                                                                                                                                                                                                     1632
                                           012700
                                                                 0014651
                                                                                                                                    MOV-
                                                                                                                                                          #PRINT,R0
                     007604
                                          012701
                                                                 000116
                                                                                                                                    MOV.
                                                                                                                                                          #78..R1
        1634 007610
                                           112720
                                                                 000040
                                                                                                              1$:
                                                                                                                                    MOVB
                                                                                                                                                          #40.(R0)+
       1635 007614
1636 007616
                                           005301
                                                                                                                                    DEC -
                                                                                                                                                          R1
                                           001374
                                                                                                                                    BNE
       1638
                    007620
                                          012705
                                                                 001465′
                                                                                                                                                          #PRINT,R5
#PMSG2,R0
                                                                                                                                    MOV
                                                                                                                                                                                                     POINT TO PRINT LINE POINT TO NUMBER OF POSSES A CONTROL OF STRING OF POSSES A CONTROL OF STRING 
       1639
                    007624
                                          012700
                                                                 0032721
                                                                                                                                    MOV
       1640
                    007630
                                          012701
                                                                 000014
                                                                                                                                    MOV
                                                                                                                                                          #PM2LN,R1
       1641 007634
1642-007636
                                           112025
                                                                                                             2$:
                                                                                                                                   MOVB
                                                                                                                                                          (R0)+,(R5)+
                                                                                                                                                                                                      :MOVE STRING TO PRINT LINE
                                          005301
                                                                                           Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
```

nandaska dari salah Tanggaran salah		A	ζ .	AGE - 21-3	15:38 P	-MAR-80	1110 27	. М ЭР П - М
0200020001-3	P85-00514R0002000	05/07/1 25 IA-RDF	Release 20	ed For R	Approv	T##K 00 -		
		2\$	BNE····	;			001375	3 007640 1
JBLE - WORD	:CONVERT DOUBLE-W	PC.PASSC PC.CONSOL	JSR· JSR·			000642. 001030.	004767 004767	007642 007646
	25	R0.R1.R2.R3.R4.R (SP)+.R5 (SP)+.R4 (SP)+.R3 (SP)+.R2	RESTOR - MOV - MOV - MOV - MOV -	ŘEST:			012604 012603 012602	007652 007652 007654 007656 007660 007662
		(SP)+,R1 (SP)+,R0	MOV:	;			012600	007664 Э
	;PRINT.# PASSES.A	#'P∡ASTWRD 10\$	CMPB BEQ			000120:		007666 1 007674
PATTERN AND CONTINUE		#*C.ASTWRD	CMPB· BEQ· CMPB·			000103; 000124	122767 001410 122767	2:007676 3:007704 4:007706
NUMBER AND CONTINUE.	*PRINT · TEST · NUMBER *PRINT · WHERE · AND · (#:T,ASTWRD 10\$ #:W,ASTWRD	BEQ. CMPB.			000124		5 007714
E-HND-CONTINGE.	:NO, EXIT	1\$	BHE	;			001003	7 007724 3
• • <u>·</u>		(PC)+,-(SP) 115.,1 ↑0<377>	ASTX\$S MOV .BYTE EMT	10\$:		001:	012746 163 104377	9 007726 007726 007730 007732
BYTES .	;POINT.TO.PRINT.L ;NUMBER.OF.BYTES. ;CLEAR.LINE.TO.BL	#PRINT,R1 #78R0 #40,(R1)	MOV: MOV: MOVB	1 \$:		001465' 000116 000040	012700 112711	1 007734 2·007740
1 CR+LF	;WRITE:OUT:1 CR+LI	R0 2\$ #15.PRINT #12.PRINT+1	DEC BNE MOVB MOVB			000015: 000012:	112767 112767	5 007752 5 007754 7 007762
		PC,CONSOL· (PC)+,-(SP) 51.,1 +0<377>	JSR EXIT\$S MOV .BYTE EMT	.		000706: 001	004767 012746 063 104377	3 007770 9 007774 007774 007776 010000

```
1672
1673
                                                                                            SUBRTH FOR MEMORY LIMITS
1675
                                                                                            INPUT:
1676
                                                                                            2(SP)
                                                                                                           ABSOLUTE LOWER LIMITS ABSOLUTE UPPER LIMITS
1677
1678
                                                                                            4(SP)
1679
                                                                                            6(SP)
                                                                                                           ADDRESS OF PROMPT ROUTINE
1680
1681
                                                                                            OUTPUT:
                                                                                                           CURRENT - WORKING - LOWER - LIMITS CURRENT - WORKING - UPPER - LIMITS
                                                                                            (SP)
                                                                                            2(SP)
1683
1684
                                                                                            WORK FIELDS USED:
                                                                                            LOWER
UPPER
1686
1687
 1688
                                                                                           PROMPT-FOR-LIMITS, A-KCR> RESPONSE-MEANS-TO-TAKE
 1689
                                                                                            THE ABSOLUTE LOWER AND UPPER LIMITS AND RETURN. THEM ON THE STACK: OTHERWISE IF THE RESPONSE IS IN THE STACK.
 1690
1691
                                                                                            THE FORM:
 1692
 1693
 1694
                                                                                            >000000 000012.
1695
                                                                                           THIS ROUTINE CONVERTS THE FIRST VALUE AND COMPARES IT AGAINST THE MEMORY'S ABSOLUTE LOWER LIMITS AT 2(SP). IF THE NEW LIMITS ARE IN RANGE, THEY ARE PLACED IN A TEMPORARY WORK FIELD, THE ROUTINE THEN CHECKS THE COMMAND LINE FOR THE UPPER LIMITS, CONVERTS THEM, AND COMPARES THEM AGAINST THE MEMORY'S ABSOLUTE UPPER LIMITS, IF THE MEMORY IN PARKET THEY APELLI OF THE MEMORY IN PARKET.
1696
 1697
 1698
 1699
1700
 1701
                                                                                           THEM-AGAINST THE MEMORY'S ABSOLUTE UPPER LIMITS, IF THE NEW LIMITS ARE IN RANGE, THEY ARE PLACE IN A TEMPORARY WORK AREA, THE ROUTINE THEN COMPARES THE NEW UPPER LIMITS WITH THE NEW LOWER LIMITS. IF THE NEW UPPER LIMITS ARE EQUAL TO OR GREATER THAN THE NEW LOWER LIMITS, BOTH NEW VALUES ARE PLACED ON THE STACK. THE ROUTINE THAT CALLED LIMITS WILL TAKE THESE VALUES OFF THE STACK AND PLACE THEM IN THE CURRENT LIMITS TABLE? DURING THE MEMORY TEST CYCLE THE LIMITS FROM THIS TABLE ARE MADE AVAILABLE TO THE MEMORY TEST CYCLE THE STROUTINES.
 1702
1793
1794
 1705
 1706
1797
1788
 1709
1710
1711
                                                                                            TO THE MEMORY TEST ROUTINES.
 1712
 1713 010002
                                                                           LIMITS:
                          004776
                                                                                                            PC.06(SP)
PC.FIND
 1714
          010002
                                           000006
                                                                                            JSR
                                                                                                                                             :PROMPT-FOR-LIMITS
                                                                                                                                             :PROMP | FUK: LITTLE
:FIRST:FIND:A:NUMBER:
:NO:OVERRIDES, LEAVE:LIMITS ALONG
:NO:OVERRIDES, LEAVE:LIMITS ALONG
1715 010006
                          994767
                                           000262
                                                                                            JSR.
 1716
          010012
                                                                                            BCN
                                                                                                            LIMX2
                           103472
          010014
                           004767
                                           000372
                                                                                             JSR
                                                                                                            PC,PACK
1718 010020
1719 010022
                           103003
                                                                                            BCC
                                                                                                            1$
                                                                                                                                             :VALUE:OK, CONTINUE
                                                                                                            PC, ERR4
                          004767
                                           001112
                                                                                            JSR
 1720 010026
                          000765
                                                                                                            LIMITS.
                                                                                                                                             :TRY-AGAIN-
 1721
1722
1723
                                                                                            GHECK - LOWER - LIMITS
 1724 010030
                          026766
                                                           000002
                                                                                                            BINWD,2(SP)
                                                                                                                                             :COMPARE LOWER · LIMITS ·
                                           167762
                                                                            1$:
 1725
         010036
                           103003
                                                                                            BHIS
                                                                                                                                             OK. CONTINUE
                                                                                                                                                                                                           PROPERTY.
                                                                                                            PC.ERR4
1726 010040
1727 010044
                          004767
                                           991974
                                                                                            JSR.
                                                                                            BR
                                                                                                            LIMITS-
                                                                                                                                             :TRY-AGAIN-
          010044
                          000756
 1728
```

```
20 M1110 27-MAR-80 15:38 PAGE 22-1
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1729
                                                       ALSO CHECK NEW LOWER LIMITS AGAINST ABSOLUTE UPPER LIMITS ON THE STACK. AN ERROR HERE WOULD SHOW UP BELOW BUT IT IS MORE CORRECT TO REPORT AN ERROR IN LOWER LIMITS IF
1730
1731
1732
                                                          THE · NEW · LOWER · LIMITS · ARE · HIGHER · THAN · THE · ABSOLUTE
1733
1734
                                                       UPPER LIMITS.
                                                                                                                  ing and the
1735 010046
               826766
                         167744 900004
                                                       OMP
                                                                 BINWD,4(SP)
                                                                                    :IS-NEW-LOW-LIMIT-GT-ABS-UPPER-LIMIT,
1736
     010054
                101403
                                                       BLOS
                                                                20$
PC,ERR4
                                                                                    :NO, NEW LOWER-LIMIT-IS-OK-
1737
1738
               004767
     010056
                                                       JSR.
     010062
               ййй747
                                                       BR
                                                                 LIMITS.
1739
1740
1741
1742
                                                       SAVE-NEW-LOWER-LIMITS: FIND-NEW-UPPER-LIMITS-IN-COMMAND
                                                       LINE:
1743 010064
               016767
                         167726
                                   -167730
                                             20$:
                                                       MOV.
                                                                 BINUD, LOWER
                                                                                    ; MOVE - IN NEW LOW - LIMITS
1744
     010072
               004767
                         000176
                                                       JSR -
                                                                 PC.FIND
                                                                                    :FIND.UPPER.LIMITS IN.COMMAND.LINE
1745 010076
1746 010100
                103003
                                                       BCC
                                                                 3$
                                                                                    ;OK, CONTINUE
               004767
                         001030
                                                       JSR
                                                                 PC, ERR5
1747
1748
1749
     010104
               000736
                                                       BR
                                                                 LIMITS.
                                                                                    :START-OVER
     010106
               004767
                         000300
                                             3$:
                                                       JSR.
                                                                PC.PACK.
                                                                                    :CONVERT UPPER-LIMITS
1750 010112
               103003
                                                       BCC.
                                                                 4$
                                                                                    :OK, CONTINUE
175 i
      010114
                                                                PC, ERR5
               004767
                         001014
                                                       JSR.
1752-010120
1753
1754
               000730
                                                       BR
                                                                LIMITS.
                                                                                    :START-OVER-
                                                       CHECK NEW UPPER LIMITS.
1755
1756 010122-
               026766
                         167670
                                             4$:
                                                       CMH
                                                                BINWD,4(SP)
                                                                                    :COMPARE UPPER-LIMITS
                                                                                                                             779 1752
1757
     010130
               101403
                                                       BLOS
                                                                 5$
                                                                                    OK, CONTINUE
1758
     010132
               004767
                         000776
                                                                PC, ERR5
                                                       JSR-
1759 010136
               000721
                                                       BR
                                                                LIMITS.
                                                                                    :START-OVER-
1760
1761
1762
                                                       COMPARE NEW LOWER LIMITS WITH NEW UPPER LIMITS.
1763
      010140
               016767
                          167652
                                   167652
                                             5$:
                                                       MOV.
                                                                BINWD, UPPER
                                                                                    :PLACE NEW UPPER LIMIT ON STACK
1764 010146
               026767
                         167650
                                   167644
                                                       CMP
                                                                                    ; IS-UPPER-LIMIT GT LOWER-LIMIT
;YES, EXIT-
                                                                LOWER, UPPER
1765
     010154
                101403
                                                       BLOS
                                                                 LIMX
      010156
1766
               004767
                         000752
                                                       JSR -
                                                                 PC, ERR5
1767
     010162
                                                       BR.
                                                                LIMITS.
                                                                                    :TRY-AGAIN
1768
1769
     010164
                                                                                    :PUT NEW LOWER-LIMITS-ON-STACK::
:PUT-NEW UPPER-LIMITS-ON-STACK::
               016766
                         167632
                                   000002 LIMX:
                                                       MOV-
                                                                 LOWER, 2(SP)
1770
     010172
               016766
                         167622.
                                   000004
                                                       MOV.
                                                                UPPER,4(SP)
1771 010200
               000207
                                             LIMX2:
                                                       RTS.
                                                                 PC.
```

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TMT------ MACRO M1:10 27-MAR-80 15:38 PAGE 23 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    1773
    1774
                                                                   SCAN-A-TABLE FOR-A-VALID-COMMAND/MNEMONIC-
    1776
1777
    1778
                                                                   RØ = NUMBER OF ENTRIES IN COMMAND TABLE
R1 -> CHAR STRING IN GCML COMMAND LINE
R2 -> TOP OF COMMAND TABLE
    1780
1781
    1782
                                                                   R1 -> ROUTINE THAT GOVERNS THE COMMAND (IF MATCH WAS MADE) AR1 -> CHAR STRING IN COMMAND LINE (IF NO MATCH WAS MADE).

R0 = RELATIVE POSITION OF MATCHED ENTRY IN TABLE
    1783
    1784
    1785
1786
    1787
    1788 010202
                                                        SCAN:
    1789 010202.
                      010346
                                                                   MOV.
                                                                               R3,-(SP)
                                                                                                      :SAVE R3
    1790 010204
                      010046
                                                                   MOV-
                                                                               R0.-(SP)
    1791 010206
                      010146
                                                                   MOV.
                                                                               R1,-(SP)
                                                                                                                                               STRING
    1792
    1793 010210
1794 010212
                      011601
                                                        FNOUT1: MOV
                                                                               (SP),R1
#2,R3
                                                                                                      :POINT TO HON-BLANK IN COMMAND L'INE
                      B127B3
                                 0000002
                                                                   MOV
                                                                                                     ; NUMBER · OF · CHARS · IN · NON-BLANK · FIELD ·
    1795 010216
                      122122
                                                        FNIH1:
                                                                   CMPB
                                                                               (R1)+,(R2)+
                                                                                                     DOES COMMAND LINE MATCH TABLE ENTRY
NO. TRY NEXT TABLE ENTRY
SUB FROM LOOP COUNT
    1796 010220
1797 010222
                      001003
                                                                   RNF
                                                                               FNOUT2
                      A05303
                                                                   DEC
                                                                               R3
    i 798
          010224
                      001374
                                                                   BHE
                                                                               FNIN1
    1799 010226
                                                                                                     COMMAND FOUND IN TABLE.

ADD + UNCOMPARED CHARS TO POINTER.

THEN ADJUST TO NEXT TABLE ENTRY.

SUB FROM OUTER LOOP COUNT.

TRY AGAIN.
                      000411
                                                                   BR
                                                                               FHMTCH-
    1800 010230
                      060302
                                                        FNOUT2:
                                                                   ADD
                                                                               R3,R2
    1801 010232
                      005202
                                                                               R2
                                                                   INC
    1802 - 010234
                      005300
                                                                   DEC
    1803 010236
                      001364
                                                                              FHOUT1
                                                                   BNE
    1804 010240
                      012601
                                                                   MOV
                                                                               (SP)+,R1
(SP)+,R0
                                                                                                     :RESTORE COMMAND LINE POINTER
    1805 010242
                      912600
                                                                                                     RESTORE RO
                                                                   MOV
    1806 010244
                      012603
                                                                   MOV-
                                                                               (SP) + .R3
          010246
    1897
                      000261
                                                                   SEC
                                                                                                     COMMAND NOT IN TABLE
    1808 010250
                      000207
                                                                   RTS
                                                                               PC.
    1809
    1810 010252
                      010201
                                                        FNMTCH: MOV
                                                                                                     ;POINT-R1 AT-MEMORY-FLAG-IN-TABLE
:POINT-TO-INCOMING R0 ON-STACK-
:GET-TOTAL-#-TABLE ENTRIES-
                                                                               R2,R1
    1811 010254
                      062706
                                 000002
                                                                   ADD .
                                                                               #2,SP
    1812-010260
                      812682
                                                                   MOV
                                                                               (SP) + .R2
    1813 010262
                      160002
                                                                   SUB
                                                                               RØ.R2
                                                                                                     :GET POSITION OF MATCHED ENTRY
    1814 010264
                      010200
                                                                   MOV.
                                                                               R2,R0
                                                                                                     :PUT IN RØ FOR RETURN
    1815 010266
                      012603
                                                                   MOV.
                                                                               (SP) + R3
                                                                                                     :RESTORE R3
    1816
          010270
                      000241
    1817 010272
                      000207
                                                                               PC.
```

生物 (1)

MANAGER STATES

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R0 M1110 27-MAR-80 15:38 PAGE 24
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1819
1820
1821
                                                               \label{eq:find-the-next-non-blank-in-the-command-buffer.} FIND-THE-LENGTH-OF-THE-STRING-THAT-STARTS-WITH-THAT-CHARACTER.
1822
1823
1824
                                                               GCMLEN - NUMBER OF UNPROCESSED BYTES IN COMMAND LINE GCMPNT - ADDR OF NEXT UNPROCESSED POSITION IN COMMAND LINE
1825
1827
1828
                                                               OUTPUT:
                                                               OOT-OT
R1 -> STRING, R0 =-LENGTH-OF-STRING-
GCMLEN, GCMPNT-UPDATED FOR-NEXT-ENTRY-INTO THIS-ROUTINE-
1829
1831
                                                               THIS ROUTINE IS DESIGNED TO BE ENTERED A NUMBER OF TIMES IN THE PARSING OF A COMMAND LINE, THE FIELDS GCMLEN AND GCMPNT ARE REFRESHED WHEN A NEW COMMAND LINE IS READ
1832
1833
1834
1835
                                                                (SEE THE MESSAGE PRINTING PROMPTING CODE).
1836
1838 010274
                                                    FIND:
1839 010274
1840 010276
                  010246
                                                               MOV.
                                                                          R2,-(SP)
                                                                                                 :SAVE - R2
                  016701
                              167652
                                                                          GCMLEH RI
                                                               MOM
                                                                                                 : # BYTES REMAINING IN COMMAND BUFFER
1841 010302
                  001440
                                                               BEQ.
                                                                           FSECX-
                                                                                                 :THERE ARE NONE
                                                                                                 JIHERE: HRE-NUME:

$LOAD: CURRENT: POINTER:

$LOOK: FOR: A - BLANK:

$OK: BUMP: TO: NEXT: CHAR:

$COMMA: IN: COMMAND: LINE:

$TREAT: COMMA: AS: BLANK:

$UMB: DOINTED.
1842 - 010304
                  016702
                              167646
                                                               MOM
                                                                           GCMPNT, R2
1843 010310
                  122712
                             000040
                                                    1$:
                                                               CMPB
                                                                           #40,(R2)
1844 010314
                  001403
                                                               BEQ.
                                                                           10$
1845 010316
                  122712
                             000054.
                                                               CMPB
                                                                           #*** (R2)
1846
      010322
                  001004
                                                               BNE.
                                                                           2$
1847
      010324
                  005202
                                                               INC
                                                                           ŘŽ.
                                                                                                 :BUMP · POINTER ·
1848 010326
                  005301
                                                                                                 SUB FROM REMAINING LENGTH
                                                               DEC
                                                                          R1
1849 010330
                  001367
                                                               BNE.
                                                                           1$
1850 010332-
                  000424
                                                               BR
                                                                          FSECX-
                                                                                                 :NO:NON-BLANK:FOUND:
1851
1852
      010334
                  010246
                                                                                                 :TEMP SAFE POINTER TO BEGINNING OF STRING :CLEAR CHAR COUNT :LOOK FOR A BLANK
                                                    2$:
                                                               MOV.
                                                                           R2,-(SP)
1853 010336
                  005000
                                                               CLR.
                                                                          RØ
1854 010340
                  122712
                             000040-
                                                    3$:
                                                               CMPB
                                                                          #40,(R2)
1855 010344
                  001407
122712
                                                               BEQ.
                                                                           4$
                                                                                                 :FOUND · END · OF · STRING ·
      010346
1856
                             000054
                                                                           #*..(R2)
                                                                                                 ★TREAT · COMMAS · AS · BLANKS ·
1857
      010352
                  001404
                                                               BEQ.
                                                                           4$
                                                                                                 :BUMP POINTER :BUMP CHAR COUNT
1858 010354
                  005202
                                                               THC
                                                                          R2 -
1859 010356
                  005200
                                                               INC
                                                                          RØ.
1860 010360
                  005301
                                                               DEC
                                                                                                 ;SUB · FROM · BYTES · REMAINING ·
1861 010362
                                                               BNE
                                                                           3$
1862
1863 010364
                  010267
                             167566
                                                               MOV.
                                                                                                 :SAVE POINTER FOR NEXT TIME
:SAVE BYTES REMAINING FOR NEXT TIME
:POINTER TO BEGINNING OF STRING
                                                                          R2,GCMPNT.
                             1864 010370
                                                                          R1.GCMLEN:
(SP)+.R1
                  010167
                                                               MOV-
1865 010374
                  012601
                                                               MOV:
1866 010376
1867 010400
                  012602
                                                               MOV.
                                                                          (SP)+,R2
                                                                                                 ; RESTORE R2
                 000241
1868 010402
                 000207
                                                               RTS
1869
1870 010404
                 012602
000261
                                                   FSECX:
                                                               MOV.
                                                                          (SP)+,R2.
                                                                                                 ;RESTORE R2
1871
     010406
                 000207
                                                               RTS
                                                                          PC:
```

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TMT----- MACRO-M1110 27-MAR-80 15:38 PAGE-25
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
   1874
   1875
   1876
                                                           CONVERT: AN: ASCII: OCTAL VALUE: FROM: THE: COMMAND: LINE: INTO: BINARY LEGAL: STRINGS: CONTAIN: FROM: 1 TO: 6 CHARACTERS:
   1877
   1878
   1879
   1880
                                                           RØ =-NUMBER-OF-CHARACTERS-IN-ASCII-STRING
R1 -> STRING
   1881
   1882
   1883
   1884
                                                           THE FIELD 'BINWD' CONTAINS THE CONVERTED VALUE
    1885
   1886
1887
         010412
                                                 PACK:
         010412
   1888
                   022700
                             ававаь.
                                                           CMP
                                                                                         ;UPPER·LIMIT·ON·OCTAL·DIGITS
   1889
         010416
                    001014
                                                           BNE
                                                                     PSECX-
                                                                                         :ERROR · EXIT
   1890
         010420
                    010146
                                                           MOV.
                                                                                         SAVE STRING POINTER TEMPORARILY
                                                                     R1,-(SP)
R0,(SP)
   1891 010422
                   060016
                                                                                         ADD
   1892-010424
                   010100
                                                           MOV
                                                                     R1.R0
    1893 010426
                             000000G
                    004767
                                                           JSR.
                                                                     PC,$COTB
                   005300
   1894 010432
                                                           DEC-
                                                                     RЯ
   1895 010434
                   020026
                                                                     R0,(SP)+
                                                                                         FULL STRING CONVERTED
    1896 010436
                   001004
                                                           BHE
   1897 010440
                   010167
                              167352.
                                                           MOV
                                                                     R1.BINWD
                                                                                         ; SAVE · CONVERTED · VALUE
   1898
    1899
         010444
                   000241
                                                 PCLCX:
                                                           CLC
    1900
         010446
                   000207
                                                           RTS
                                                                     PC:
   1901 010450
                   000261
                                                 PSECX:
                                                           SEC.
   1902-010452-
                   000207
                                                           ŘTS:
   1903
   1904
   1905
   1906
                                                           CONVERT: A: VALUE: FROM: BINARY: TO: PRINTABLE: FORM. R1 =: WORD: TO BE: CONVERTED: R5 -> PRINT: LINE:
   1997
   1908
   1909
   1910
   1911 010454
                                                 ÜNPK:
   1912-010454
                                                           SAVĘ
                                                                     R0.R1.R2
          010454
                   010046
                                                                     R0.-(SP)
                                                           MOV:
          010456
                   010146
                                                           MOV:
         010460
                                                           MOV.
                                                                     R2_* - (SP)
   1913
   1914 010462
                   010500
                                                                                         PREPARE TO CALL STATEM SUBRINA
KEEP LEADING ZEROS
CONVETT TO CONTROL ASCE
RESTORE PRINT VINE POINTER
                                                           MOV.
                                                                     R5,R0
   1915 010464
                   012702
                             0000013
                                                           MOV.
                                                                     #1,R2
   1916 010470
1917 010474
                   004767
                             000000G
                                                                     PC.$CBOMG
R0.R5
                   010005
                                                           MOV
   1918
         010476
                   005205
                                                           INC -
                                                                                         :AND BUMP IT
   1919
   1920 010500
010500
                                                           RESTOR
                                                                     R0.R1.R2
(SP)+.R2
                   012602
                                                           MOV.
         010502
                   012601
                                                           MOV.
                                                                     (SP) + R1
         010504
                   ð12600
                                                           MOV.
                                                                     (SP)+,R0
   1921 010506
                   000207
                                                           RTS
                                                                                                                       福福水
                                                                                                                              THE COUNTY
```

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TMT------ M
                         27-MAR+80.15:38 PAGE_26
                                       Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
   1924
    1925
                                                         CONVERT NUMBER OF PASSES TO ASCII DECIMAL.
   1926
                                                         INCLUDE DOUBLE WORD CONVERSION (BINARY TO ASCII DECIMAL)
    1927
                                                                  R5 -> PRINT-LINE.
FIELD-'PASS' = LOW-ORDER PASS-COUNT-
FIELD-'PASSH' =-HIGH-ORDER-PASS-COUNT-
    1928
   1929
    1930
    1931
                                                         OUTPUT: R5 -> NEXT PRINT LINE POSITION AFTER CONVERTED VALUE
    1932
    1933
    1934
         010510
                                                PASSC:
    1936
         010510
                   005767
                                                                   PASSH-
                                                                                      :IS-PASS NUMBER-A-DOUBLE-WORD
                                                                                      :YES, CONVERT DOUBLE WORD
:PREPARE TO CALL CONVERSION RTN
    1937
         010514
                   001011
                                                                   DOUBLE
         010516
                   010500
                                                         MOV
                                                                   R5.R0
    1939 010520
                                                                                      :NUMBER TO BE CONVERTED :SUPPLY LEADING ZEROS
                                                         MOV
                                                                  PASS,R1
    1940 010524
                   012702
                             000001
                                                                   #1.R2
    1941 010530
                   004767
                             000000G
                                                         ISR
                                                                   PC. $CBDSG.
    1942-010534
                   010005
                                                         MOV
                                                                                      :RESTORE PRINT-LINE-POINTER
                                                                   RALRS.
    1943 010536
                   000453
                                                                   PASSX-
                                                         BR
                                                                                      :EXIT-
    1944
         010540
    1945
                   016701
                            167414
                                                DOUBLE: MOV
                                                                   PASSH,R1
                                                                                      :LOAD·HIGH·WORD·
    1946
         010544
                   016702
                            167412
                                                         MOV
                                                                  PASS.R2
R3.-(SP)
                                                                                      :LOAD.LOW.WORD.
    1947 010550
                   010346
                                                         MOV
    1948 010552
                   010446
                                                         MOV.
                                                                   R4,-(SP)
                                                                                             oming socialization of the second
                                                                                      :R3 = LOOP COUNTER
:R4->CONVERSION STORAGE AREA
    1950 010554
                   012703
                                                         MOV-
                                                                   #10..R3
    1951 010560
                   012704
112724
                             0106701
                                                         MOV.
                                                                   #ASCNST,R4
    1952 010564
                             ававья.
                                                1$:
                                                         MOVE
                                                                   #60,(R4)+
                                                                                      :CLEAR STORAGE AREA TO 0'S
    1953 010570
                                                         DEC
                                                                   R3
    1954 010572
                   001374
                                                         BNE
    1955
                                                                                      :R4->LAST-BYTE-OF-STORAGE
                             010702
    1956
         010574
                   012704
                                                         MOV
                                                                   #ASCNST+12,R4
    1957
         010600
                   012703
                             000012
                                                         MOV.
                                                                   #12,R3
#10.,R0
    1958 010604
                   012700
                             000012
                                                         MOV:
    1959 010610
                                                                   $DDIV.
         010610
                   004767
                             000000G
                                                         JSR -
                                                                  PC. $DDIV.
    1960 010614
                   062700
                            000060.
                                                         ADD
                                                                   #60,R0
                                                                                     ;ASCII NO. (REMAINDER+60 OCTAL)
    1961 010620
1962-010622
                   110044
                                                         MOVB
                                                                   R0.-(R4)
                   005303
                                                         DEC:
                                                                   R3
    1963 010624
                   001367
                                                         BNE
                                                                   2$
    1964
         010626
    1965
                   012703
                            000012
                                                         MCV.
                                                                   #12,R3
    1966
                   122724
                                                                                      REMOVE LEGOD THE ZEROS
         010632
                            ййййййй
                                                         CMPB
                                                                   #60,(R4)+
         010636
    1967
                   001003
                                                         BNE
DEC
                                                                   4$
                   005303
    1968 010640
                                                                   R3
    1969 010642
                   001373
                                                         BNE
                                                                   3$
    1970 010644
                   005203
                                                                                      ; IF ALL 0'S, THE LAST ONE IS OK
    1971
    1972-010646
                                                         DEC:
                                                4$:
    1973 010650
                   010401
                                                         MOV.
                                                                   R4.R1
                                                                                      :R1-> RESULT-
    1974 010652
                   010302
                                                         MOV
                                                                   R3,R2
                                                                                      ;R2. = . LENGTH . OF . RESULT.
    1975
    1976 010654
1977 010656
                   112125
305302
                                                         MOVB
                                                                                      :MOVE - CONVERTED - VALUE - TO - PRINT - LINE -
                                                                   (R1)+,(R5)+
                                                         DEC
                                                                   R2
    1978 010660
                   001375
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1979 1980 010662-1981 010664 1982 010666 1983 1984 1985 010670 012604 012603 000207

MOV: MOV: RTS: (SP)+.R4 (SP)+.R3 PC PASSX:

: RETURN

ASCNST: .BLKW-

;CONVERSION-STORAGE-AREA

```
TMT----- M2
              RO M1110 27-MAR-80∷15:38 PAGE 27
                                          Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
    1987
   1988
   1989
                                                              WRITE A PRINT LINE TO TTO
    1990
   1991
1992 - 010702
                                                    CONSOL:
    1993 010702
                    012700
                               000120
                                                              MOV
                                                                         #80.,R0
                                                                                              :PRINT-BUFFER-BYTE COUNT
    1994 010706
                     012701
                               0016031
                                                               MOV-
                                                                         #PRINT+78..R1
                                                                                             #POINT-PAST END OF BUFFER #LOOK-FOR-A-NON-BLANK-
#OK* WRITE-LINE-
    1995 010712
                     122741
                               000040
                                                    1$:
                                                               CMPB
                                                                         #40.-(R1)
          010716
    1996
                     001003
                                                               BHE
                                                                         2$
    1997
          010720
                     005300
                                                               DEC
                                                                         RØ
                                                                                             : DEC · CHAR · COUNT
    1998 010722
                     001373
                                                               BNE
                                                                         1$
   1999
          010724
                     000436
                                                                         ABEND2
                                                                                             :NO NON-BLANKS?
   2000
   2001
          010726
                                                                         #IO.WVB,#LUN.TT,#EFN.1,,#STAT,,<#PRINT-2,R0,ABEND2
                                                    25:
                                                               QIOW$S
          010726
010730
010732
                     005046
                                                               CLR
                     005046
                                                               ČĽR
                                                                         -(SP)
                     005046
                                                               CLR
                                                                         -(SP)
          010734
010736
010740
                     005046
                                                              CLR
                                                                         -(SP)
                                                                        R0,-(SP)
#PRINT-2,-(SP)
                     010046
                                                              MOV
                     012746
                               0014637
                                                              MOV.
          010744
                     005046
                                                               CLR
          010746
                     012746
                               0000067
                                                              MOV
                                                                         #STAT,-(SP)
          010752
                     005046
                                                              DLR.
                                                                         -(SP)
          010754
010760
                                                                         #EFN.1,(SP)
#LUN.TT,-(SP)
#IO.WVB,-(SP)
                     112716
                               000001
                                                              MOVB
                    012746
012746
                               000001
000000G
                                                              MOV.
          010764
                                                              MOV.
          010770
010772
010774
                     012746
                                                              MOV.
                                                                        (PC)+,-(SP)
3,12.
                     003
104377
                                   014
                                                               BYTE
                                                              EMT
                                                                         ↑0<377>
          010776
                     103002
                                                              BCC.
                                                                          . +6
          011000
                     004767
                               000016
                                                                         PC.ABEND2
                                                              JSR
   2002
2003
   2004
          011004
                     012701
                               0014651
                                                                         #PRINT,RI
                                                              MOV.
                                                                                             ;POINT-TO-STRING-
:CLEAR-LINE-TO-BLANKS-
;DEC-LOOP-COUNT-
   2005 011010 2006 011014
                     112724
                               000040
                                                    4$:
                                                                         #40.(R1)+
                                                              MOVB
                    005300
001374
                                                              DEC
                                                                         RØ
   2007
          011016
                                                              BNF
                                                                         4$
   2008 011020
                     000207
                                                                        PĈ
                                                              RTS
   2009
          011022
   2010
                                                                        #MYSELF.
#MYSELF.-(SP)
@(SP).-(SP)
                                                    ABEND2:
                                                              ABRT$S
          011022
                    012746
                               000000
                                                              MOV-
          011026
                    017646
                               000000
                                                              MOV
                                                                         #2,2(SP)
@2(SP),2(SP)
                    062766
017666
          011032
                               000002
                                         000002
                                                              ADD
          011040
                               000002
                                         000002
                                                              MOV.
                    012746
                                                              MÕV.
          011046
                                                                        (PC)+,-(SP)
83.,3
↑0<377>
          011050
                                                               .BYTE
                                   003
                    104377
          011052-
```

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TMT-----MACRO-M1110 27-MAR-80 15:38 PAGE-28
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
   2012
   2013
                                                         WRITE . TO . TTO AND . PROMPT .
   2014
   2015
   2016
   2017 011054
                   005267
                             166732
                                                ENDTST:
                                                                   ERWORD -
   2018 011060
                   005267
                             166726
                                                HLTTST:
                                                          THE
                                                                   FRUORD
                                                          ONI
CHI
                   йй5267
   2019 011064
                             166722
                                                STOP:
                                                                   ERLIORD.
         011070
                   005267
   2020
                             166716
                                                BEGTST:
                                                                   ERWORD
   2021
        011074
                   005267
                                                                   ERWORD
                             166712
   2022-011100
2023 011104
                   005267
005267
                             166706
                                                ERR12:
                                                          IHC
                                                                   ERMORD.
                             166702
                                                ERRII:
                                                          INC
                                                                   ERWORD
   2024 011110
                   005267
                             166676
                                                ERR10:
                                                          INC
                                                                   ERWORD.
   2025 011114
                   005267
                                                ERR9:
                                                          INC
                                                                   ERWORD
   2026
2027
                                                          TNC
         011120
                   005267
                             166666
                                                FRR8:
                                                                   FRUORD
         011124
                   005267
                                                ERR7:
                                                          INC
                                                                   ERWORD -
                             166662
   2028 011130
                                                ERR6:
                                                          INC
                                                                   ERWORD
                   005267
                                                          INC.
   2029 011134
                   005267
                             166652
                                                ERR5:
                                                                   ERLIORD
   2030 011140
                                                                   ERWORD:
                   005267
                             166646
                                                ERR4:
   2031 011144
                   005267
                                                ERR3:
                             166642
                                                          INC
                                                                   ERWORD
    2032-011150
                   005267
                             166636
                                                ERR2:
                                                          INC
                                                                   ERWORD
   2833
                                                NESTOP:
   2034 011154
                                                          INC
INC
INC
                                                EROPT:
   2035 011154
                   005267
                             166632
                                                                   ERWORD:
    2036 011160
                   005267
                             166626
                                                LPTST:
                                                                    ERWORD
   2037 011164
                   005267
                             166622
                                                HSRTST:
                                                                   ERLIORD
                   005267
   2038 011170
                             166616
                                                SELTST:
                                                                   ERMORD
    2039 011174
                                                PMPTT:
                   005267
                             166612
                                                          INC
                                                                   ERWORD -
    2040
                                                PMPTO:
         011200
                   005267
                              166606
                                                                    ERWORD
    2041 011204
                   005267
                             166602
                                                PMPTI:
                                                                   ERWORD
                                                PMPTC:
   2042-011210
2043 011214
                                                          THO
                   005267
                             166576
                                                                   ERMORD.
                   005267
                             166572
                                                PMPTB:
                                                          INC
                                                                   ERLIORD
    2044 011220
                   005267
                                                PMPTA:
                             166566
                                                          INC
                                                                   ERWORD
    2045 011224
                    005267
                                                MEMSEL:
                                                                    ERWORD
    2046 011230
                   005267
                             166556
                                                ALLSEL:
                                                          INC
                                                                    ERWORD
    2947
                                                                    <.-NESTOP>/4
                   000014
                                                NEST -
    2048
                                                          USS: THE: INDEX: ERWORD: TO: COUNT: UP FROM: THE: BOTTOM: OF: THE MESSAGE TABLE: FIND: THE: END: OF: THE: MESSAGE FIRST. THEN:
    2049
    2050
    2051
                                                          THE BEGINNING, THEN GET THE LENGTH.
    2852
    2053
         011234
                   010246
                                                          MOV
                                                                    R2,-(SP)
                                                                                       :SAVE - R2
         011236
                   016702
                              166550
                                                          MOV
                                                                    ERWORD, R2
                                                                                       :LOAD LOOP COUNT
                                                                                       :LOAD LOOP.COUN!
:POINT.TO.END.OF.MESSAGE.TABLE:
:LOOK.FOR.END.OF.MESSAGE
    2055
         011242
                   012701
                             0032711
                                                          MOV.
                                                                    #ASCIZ,R1
    2856
         011246
011250
                    105741
                                                15:
                                                          TSTR
                                                                    -(R1)
    2057
                    001376
                                                          BHE
                                                                    1$
                                                                    ŔŹ
    2058 011252
                    005302
                                                          DEC
                                                                                       :LOOP - COUNT -
    2059 011254
                    001374
                                                          BNE
                                                                    1$
                                                                                       ; BACK · UP ANOTHER · MESSAGE
                                                                                       :SAVE POINTER TO END OF MESSAGE BACK UP TO BEGINNING OF MESSAGE
    2060 011256
                   010100
                                                          MOV
                                                                    R1,R0
    206 i
         011260
                                                2$:
                                                          TSTR
                                                                    -(R1)
                    105741
    2062-011262
                                                                    2$
                                                          BHE
   2063 011264
                   005201
                                                          INC
                                                                    R1
                                                                                       :BUMP TO FIRST CHAR OF MESSAGE . .
                                                                                       RO NOW = MESSAGE LENGTH
   2064 011266
                    160100
                                                          SHB
   2065 011270
                   012602
                                                          MOV
                                                                    (SP)+,R2· ±= ±3
   2066
                                                          QIOW$S #IO.WVB,#LUN.TT,#EFN.1.,#$TAT/.<R1.R0>,ABEND
   2067
         B11272
              72.
                   005046
                                        Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
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TMT----
              P0 M1110 27-MAR-80 15ApproveeFFeP Release 2005/07/12 CIA-RDP85-00514R000200020001-3
          011274
                    005046
                                                             CLR
                                                                        -(SP)
          0ii276
                    005046
                                                             CLR
                                                                        -(SP)
         011300
                    005046
                                                             CLR
                                                                        -(SP)
         011302
                    010046
                                                             MOV
                                                                       R0,-(SP)
          011304
                    010146
                                                             MOV:
                                                                       R1.-(SP)
          011306
                    005046
                                                             CLR
                                                                        -(SP)
         011310
011314
                    012746
                              0000061
                                                             MOV
                                                                        #STAT, - (SP)
                    005046
                                                             CĹŔ
                                                                        -(SP)
          011316
                    112716
                              000001
                                                             MOVB
MOV
                                                                        #EFN.1.(SP)
         011322
                    012746
                              000001
                                                                       #LUN.TT,-(SP)
#IO.WVB,-(SP)
(PC)+,-(SP)
         011326
011332
                    012746
                              000000G 4
                                                             MOV.
                    012746
                                                             MOV
          011334
                        003
                                  014
                                                                       3,12.
↑0<377>
                                                             .BYTE
         011336
011340
                    104377
                    103002
                                                                        . +6
                    004767
          011342
                              000106
                                                             JSR
                                                                       PC, ABEND
   2069
   2069
         011346
                                                             CLEF$S
                                                                       #EFH.1
          011346
                    012746
                              аявая і
                                                             MOV.
                                                                        #EFH.1,-(SP)
          011352
                    012746
                                                             MOV:
                                                                        (PC) + . - (SP)
         011354
                        037
                                  002
                                                             .BYTE
EMT
                                                                       31.,2.

+0<377)
         011356
                    104377
   2070 011360
                    105767
                              166422
                                                             TSTB
                                                                       STAT
                                                                                            :GOOD RETURN
   2071 011364
2072
                    003433
                                                             BLE
                                                                       ABEND -
                                                                                            :N0.
   2073
                                                             ISSUE-GCML
   2074
2075 011366
                    022767
                                       166416
                                                             CMP
                                                                       #MEST, ERWORD
                                                                                            ;PROMPT·WITH·MESSAGE
   2076 011374
                    002424
                                                             BLT
                                                                       TTX:
                                                                                            :NO. JUST EXIT
   2078 011376
                    012700
                              0000327
                                                             MOV
                                                                                            :POINT.TO.GCML.BUFFER:
:NUMBER.OF.WORDS:
                                                                       #GCMBUF,R0
   2079 011402
                    012701
                              000051
                                                             MOV.
                                                                       #41.,R1
(R0)+
   2080 011406
                    005020
                                                   3$:
                                                             CLR.
                                                                                            :CLEAR · BUFFER
   2081
         011410
                    005301
                                                             DEC
                                                                       R1
   2082
         011412
                   001375
                                                             BNE
                                                                       3$
   2083
         011414
   2084
                                                             GCML $
                                                                       #GCMBLK -
         011414
                    012700
                              0033221
                                                             MOV.
                                                                       #GCMBLK.R0
G.PSDS(R0)
         011420
                    005060
                                                             CLR
                              000142
          011424
                    004767
                              000000G
                                                                       PC..GCML1
                                                             JSR
   2085
         011430
                    103411
                                                             BOS
                                                                       ABEND.
G.CMLD(R0).GCMLEN:SAVE LENGTH:
#GCMBUF,GCMPNT :INITIALIZE.COMMAND.BUFFER:@OINTER
ERWORD: :CLEAR ERROR NUMBER_INDICATOR.
                                                                       ABEND.
   2086 011432
                              000146 1166514
0000321166510
                   016067
                                                             MOV.
   2087
         011440
                   012767
                                        166510
                                                             MOV-
   2088 011446
                    005067
                              166340
                                                  TTX:
                                                             CLR -
   2089 011452
                    000207
                                                             RTS
                                                                                            : AND - RETURN -
                                                                                                             2090
   209 i
         011454
                                                  ABEND:
                                                             ABRT$S
                                                                       #MYSELF -
                   012746
017646
         011454
                                                                       #MYSELF:
#MYSELF:-(SP)
@(SP):-(SP)
#2:2(SP)
@2(SP):2(SP)
                              0000000
                                                                                                           THE TY
                                                             MOV:
         011460
                              000000
                                                             MOV
                   062766
017666
         011464
                              000002
                                        000002
                                                             ADD.
         011472
                              000002
                                        1000002
                                                             MOV
         011500
                   012746
                                                             MOV
                                                                       (PC) + . - (SP)
                   123
104377
         011502
                                  003
                                                             .BYTE
                                                                       83.,3
↑0<377>
         011504
                                                             EMT
   2092
   2093
                   0036301
                                                             .END
                                                                       START.
```

er , William,

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TMT-----MACRO-M1110 27-MAR-80 15:38 PAGE-28-2
                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
        = . 000001
                               CK2.
CK3
                                          001276RG
                                                               FN.FSC
                                                                         000004
                                                                                                         003322R
                                                                                         004 GCMBLK
                                                                                                                              MT1B
                                                                                                                                       000026R
ABEND
                                                               FN.FSD.
                                                                                         004 GCMBUF
004 GCMLEN
                                                                                                                              MYSELF 000000R
          011454R
                                          001300RG
                                                                         000020
                                                                                                         999932R
ABEND2 ·
          011022R
                               CMILUH = . 000002 .
                                                               FH.MHR.
                                                                         000010
                                                                                                         000154R ·
                                                                                                                              Ν.
                                                                                                                                      = .0000 12
          003634R
                                      = 000006
                                                               FH. HMR
                                                                          000022
                                                                                         004 GCMPNT
                                                                                                         000156R
                                                                                                                             -NEST
                                                                                                                                     = 000014%
          011230R
ALLSEL
                               CONSOL
                                          010702R
                                                               FM.QLS
                                                                          000006
                                                                                         004 GE.BIF= 177775
                                                                                                                              NESTOP 011154R
ALLSTR -
ALLTST=
          000401R
                               CTBL
                                          000430R
                                                               FH.RDC
                                                                         000014
                                                                                         004 GE.CLO= 000004
                                                                                                                              N.BFAC = . 000004
                               CURL IM
          000010
                                          001150R
                                                               FN.UPD
                                                                         000012
                                                                                         004 GE.COM= 000001
                                                                                                                              M.BHGH= 000006
AMSG
          001355R
                                DBSLEN= 000116
                                                               FSECX.
                                                                          010404R
                                                                                              GE.CON= 0000020
                                                                                                                              N.BTCH= 000004
N.BUFB= 004000
N.BUFW= 002000
                               DG.ERR= 001000
DG.SDF= 002000
ASCIZ
          003271R
                                                               FTBL
                                                                                              GE:EOF=:177766
ASCHST
          010670R
                                                               F.ACTL= 0000076
                                                                                              GE. IND = 000002
                                                               F.ALOC= 000040
F.BBFS= 000062
AST
                                DG.TDF=-004000
          007206R
                                                                                              GE.IOR= 177777
GE.LC = 000010
                                                                                                                              N.DID = 000024
ASTURD
                                DOUBLE 010540R
                                                                                                                              N.DVNM= 000032
N.FID = 000000
                                                               F.BDB = 000070
F.BGBC = 000057
F.BKDN = 000026
                                                                                              GE: MEE 7 177774
GE: OPR - 177776
GE: RBG - 177730
ASWRK
          001316R
                                EAST
                                          007564R
        =·000002·
                                                                                                                              N.FNAM= 0000<del>06</del>
N.FOS = 000764
N.FTYP= 000014
                                FFN:1 = 000001
                                EMSG -
                                          001366R
BEGTST-
          011070R
                                ENDL IM
                                          004240R
                                                               F.BKDS= 000020
                                                                                               GE:SIZ=:000040
BINUD:
           999916R
                               ENDLH - = ENDOF -
                                          000014
003306R
                                                               F.BKEF= 000050
F.BKP1= 000051
                                                                                               G.CMLD= 000146
                                                                                                                              N.FVER= 000016
BITVAL = . 000000
                                                                                              G.DPRM=.000160
G.BRP = 000140
G.ISIZ= 000020
                                                                                                                              N.NEXT= 000022
N.QURY= 000031
N.STAT= 000020
BIT0
BIT1
        = 000001
= 000002
                                ENDTST
                                          011054R
                                                               F.BKST= 000024
                                ERL IM-
                                          000014R
011154R
                                                               F.BKVB = 000064
F.CHR = 000075
                                                                                                                              N.SUNT= 000002
N.UNIT= 000034
                                EROPT:
                                                                                              G.LPDL=:000060
G.MODE= 000141
BIT11 = 004000
                                ERPRMT
                                                               F.CNTG= 000034
                                          005160R
BIT12 --
                                                               F.DFNB= 000046
F.DSPT= 000044
F.DVNM= 000134
          010000
                                ERRADD
                                          001304RG
                                                                                               G.PSDS=-000142
                                                                                                                                      = 0000020
BITI3 =
          020000
                                ERROT.
                                          001306RG
                                                                                              G.SIZE=-000224
HALT- =-000020
HLTTST- 011060R
                                                                                                                              ÕUT1
                                                                                                                                         011074R
BIT14 = 040000
BIT15 = 100000
                                                                                                                              PACK
                                                                                                                                         010412R ·
                                                               F.EFBK= 000010
F.EFN = 000050
F.EOBB= 000032
                                                                                                                              PAR$$$=
PASS
                                FRRORY
                                          007170R
                                                                                                                                        000027
        = 000004
                                ERR10
                                          011110R
                                                                                                      = 0000010
                                                                                                                                         000162R
BIT3
        = 0000010
                                ERR11
                                                                                               IO.ATA= ****** GX
                                          011104R
                                                                                                                              PASSC
                                                                                                                                         010510R
        = 0000020
RIT4
                                ERR12
                                          011100R
                                                               F.ERR. = 0000052
                                                                                               IO:UVB= ********* GX.
                                                                                                                              PASSH
                                                                                                                                         000160R
        = . 000040
BIT5
                                ERR2
                                                                                                        005614R
                                          011150R
                                                               F.FACC= 000043
                                                                                               JMPMT.
                                                                                                                              PASSX
                                                                                                                                         010666R
        = 000100
                                ERR3
BIT6
                                                               F.FFBY= 000014
                                          011144R
                                                                                              LASTJ.
                                                                                                         006036R
                                                                                                                              PAST
                                ERR4
BIT7
                                          011140R
                                                               F.FNAM= 000110
                                                                                              LASTJ1
                                                                                                         006040R
                                                                                                                              PCLCX-
                                                                                                                                         010444R
                                                               F.FNB·= 000102
F.FTYP= 000116
F.FVER= 000120
F.HIBK= 000004
BIT8
        = 000400
                                ERR5
                                                                                              LIMITS.
                                          011134R
                                                                                                        0100028
                                                                                                                              PL IM
                                                                                                                                         994964R
BITS
        = .001000
                                FRRE
                                          011130R
                                                                                              LIMNUM= . 000014
                                                                                                                              PMPTA
                                                                                                                                         011220R
        = . 000000
BYTE0
                                ERR7
                                          011124R
                                                                                              LIMREF -
                                                                                                         000700R
                                                                                                                              PMPTB
        = · 000001
                                ERR8
                                          011120R
                                                                                              LIMX
LIMX2
LOOP
                                                                                                                              PMPTC
PMPTI
                                                                                                         010164R
                                                                                                                                         011210R
BYTE2 - = - 000002
                                ERR9
                                                                F.LUN -- 000042
                                          011114R
                                                                                                         010200R
                                                                                                                                         011204R
BYTE3 = 000003
BYTE4 = 000004
                                ERWORD
                                          000012R
                                                               F.MBCT= 000054
                                                                                                      = 000001
                                                                                                                              PMPTO
                                                                                                                                         011200R
                                                               F.MBC1 = 000055
F.MBFG = 000056
                                                                                               LOOPCT 000164R
                                ERM1
                                          001310RG
001312RG
                                                                                                                              PMPTT
                                                                                                                                         011174R
BYTE5 = 000005
                                ERW2
                                                                                               LOWER.
                                                                                                         000022R
                                                                                                                              PMPT10
                                                                                                                                         004532R
BYTE6 = 000006
BYTE7 = 000007
                                ERW3
                                           001314RG
                                                                F.HRBD= 000024
                                                                                               LPRMPT 005032R
                                                                                                                              PMSG.
                                                                                                                                         991339R
                                          жжжжжж БХ
                                FD.CCL=
FD.FID:
                                                                 .NREC = .000030
                                                                                               LPTST.
                                                                                                                              PMSG2
                                                                                                                                         003272R
BYTE8 - = - 000010
                                          000000
                                                          003 F.OVBS= 000030
                                                                                               LUN.TT=-0000001
MEM- =-000006
                                                                                                                              PM2LN -=
                                                                                                                                         000014
                                                          003 F.RACC=-000016
003 F.RATT=-000001
BYTE9 = 000011
                                FD.FNB
                                          000006
                                                                                                                              PREADD.
                                                                                                                                         001302RG
                                           000004
BYTVAL= 000012
                                FD.FVR
                                                                                               MEMERR · 006540RG
                                                                                                                              PRINT
                                                                                                                                         001465R-
                                                          003 F.RCNM= 000034
F.RCTL= 000017
F.RSIZ= 000002
        = 0000004
                                FD.LEH
                                          000010
                                                                                               MEMSEL -
MEMTOP
                                                                                                         011224R
                                                                                                                                         010450R.
CAST-
           007460R
                                004012R
                                                                                                                              REST
                                                                                                                                         007652R
CF.COT= 000041
CF.DGN= 000046
                                FD.TTY
                                           жжжжжж GX
                                                                                                         003706R
                                                                                               MOVE -
                                                                                                                              RMSG
                                                                                                                                         001400R
                                                               F.RTYP= 000000
F.SEQN= 000100
F.SPDV= 000072
                                FIND .
                                           010274R
                                                                                               MS:DGN=
                                                                                                                               SCAN
                                                                                                                                         010202R
CF.DHR= 000042
                                EMSG -
                                           991335R
                                                                                               MTCNT.
                                                                                                         000172R
                                                                                                                              SELECT
                                                                                                                                         000166R
 CF.DMC= 000047
                                           010216R
                                                                                               MTJUMP
                                                                                                         006530R
                                                                                                                               SELOOP
                                                                                                                                         004314R
CF:HBR= 000045
                                ENMTCH
                                          010252R
                                                               F.SPUN= 000074
F.STBK= 000036
                                                                                               MTMA IN
                                                                                                         005400R
                                                                                                                               SELTST
                                                                                                                                         011170R
CF.HRL= 000044
                                FHOUT1
                                          010210R
                                                                                               MTPNT.
                                                                                                         999179R
                                                                                                                               SERR
                                                                                                                                         004356R
CF:UPD= 000043
                                           010230R
                                                               F.UNIT= 000136
                                FN0UT2
                                                                                               MTREF
                                                                                                         000460R
003764R
                                                                                                                               SETTBL
SR'ARE
                                                                                                                                         000174R
000114
                                                                                                                                                  004 F.URBD= 000020
004 F.VBN = 000064
004 F.VBSZ= 000060
CHECK -
           004616R
                                FH.ACK
                                          000016
CHECKØ
           005000R
                                FN.FSA
                                          000000
                                                                                               MTSET
                                                                                                         005304R
                                                                                                                               SR.ARS
                                                                                                                                         000106·%
                                FN.FSB
CKDATA:
          001274RG
                                          000002
                                                                                               MTSUB
                                                                                                         999739P
                                                                                                                               SR.DAY
                                                                                                                                         000010
                                           Approved For Release 2005/07/12
                                                                                     FIA-RDP85-00514R000200020001-3
```

1.002

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0 M1110 27-MAR-80 15:38 PAGE 28-3
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
SYMBOL TA
SR.DLT.
          000014
                                                            T$BT· = 000020
                         002 S.FNAM= 000006
                                                                                         T$1CLK=-000400
                                                                                                                       UNMSG
                                                                                                                                 001412R
                         002 · S · FNB · = · 000036
SR.ECB
          000047
                                                            T$BTAR=.000030
T$BTD-=.002000
T$CD-=.000100
                                                                                         T$8BEN= 000020
                                                                                                                       LINPK
                                                                                                                                 010454R
SR.ECH
                         002 S.FNBW= 000017
                                                                                                   006064R
                                                                                                                       UPPER
                                                                                                                                 NANASAR
                        002 S.FNTY= 000004
002 S.FTYP= 000002
SR.ECL.
          000050
                                                                                         T1ADDR. 001214R
                                                                                                                       USRTST.
                                                                                                                                 011164R
SR.FIB
          000012
                                                            T$CLK - = 002000
                                                                                                                       WAST.
                                                                                         TIF.
                                                                                                = · ***** GX:
SR.GRE
          000100
                        002 · S : NFEN = : 000020
                                                            T$DISK= 000200
T$DRD = 000004
                                                                                                 = · ****** GX ·
                                                                                         T1I-
                                                                                                                                 000000
SR.GRS
          000072
                         002
                                       000040
                                                                                         Tio.
                                                                                                 = · ******* GX
                                                                                                                       WORD1 =
                                                                                                                                 000002
SR:LEH
          000122
                        992
                             · TAST ·
                                       007502R
                                                            T$EMEM=.010000
                                                                                         TIT.
                                                                                                 = · жжжжжж GX ·
                                                                                                                       WORD2 -=
SR.LIN
          000066
                         002 - TCDADD
                                                            T$FSAA= · 000000
T$FSAB= · 000004
                                       001244R
                                                                                         Tie
                                                                                                   006274R
                                                                                                                       WORD3
                                                                                                                                 000006
SRILIP
          000062
                         002
                             TCUADD
                                       001260R
                                                                                                   006300R
                                                                                                                       MORD4 =
                                                                                                                                 000010
SR. MON
          ававая
                         002 · TD$CTR= · 176370
                                                            T$FSAC= 0000014
                                                                                         WORD5
                                                                                                                                 000012
SR.HDC
          000042
                         002 · TD$CTW= · 176360
                                                            T$FSB2=-000010
                                                                                                                       WORD6
WORD7
                                                                                                                                 000014
SR.HDS
                             TD$INL = 004000
                         002
                                                            T$IB: =:000026
                                                                                          T12FU = жжжжжжж GX
                                                                                                                                 000016
SR:HIH
          000030
                         002
                             TD$MEM= 000270
                                                            T$IBAR = . 000024
                                                                                         T12ID:=: жжжжжж GX
                                                                                                                       WORD8
                                                                                                                              = 000020
SR. NIP
          000022
                         002·TD$0AR=-176344
                                                            T$IBE - 020000
                                                                                         T12IU = · ******* GX-
T12OD - = · ******* GX-
                                                                                                                       WORD9 - 000022
SR.SDB
                             TD$0TR=-176346
          000032
                         002
                                                            T$IBF - = 040000
T$ICD - 0000040
                                                                                                                       WRDVAL = . 000024
SR.SRC
          000002
                             TD$QRD= 000274
                         002
                                                                                         T120U-=-жжжжжжж GX-
                                                                                                                       ZREL
                                                                                                                                 004402R
                        002 · TD$RST= · 176366
002 · TD$SW = · 176376
                                                            T$MODE = . 004000
SR:SUN
          оооооо
                                                                                         T12TD - = · ****** GX
                                                                                                                       $CBDSG= ******** GX
SR.TWS
                                                            T$08: =:000036
T$08E:=:004000
T$08F:=:010000
          000056
                                                                                         T12TU - ****** GX
                                                                                                                       $CBOMG = ******* GX
$CDTB = ******* GX
SR:WSL
                             TD$TAR= 176372
                         002
                                                                                                   006074R
SR.YR.
          999994
                         002-TD$TAW=-176362
                                                                                         T.3
                                                                                                   006110R
                                                                                                                       $C0TB - = - ******
                                                                                                                                         GX.
SR.1IH
          000024
                        002·TD$TDR=-176374
                                                            T$OBRA= 000034
                                                                                         T4
                                                                                                   006126R
                                                                                                                       $DDIV = ******** GX
$DIV = ********* GX
          000016
                        002 · TD$TDW= · 176364
                                                            T$08WA= 000032
                                                                                                   006144R
                                                                                          T5
STADDR
          001200R
                              TESTS - 000014
                                                            T$0UTA= 100000
                                                                                         T6
                                                                                                   006174R
                                                                                                                             = ****** GX
                                                                                                                       $MUL
                              TEST10= 000004
START.
          003630R
                                                            T$RBD0=.000200
                                                                                         T6CHK -
                                                                                                   004574R
                                                                                                                       $$$
                                                                                                                              = 003502R
STAT-
          ABBBBBB.
                              TEST6 = 0000002
                                                            T$RNB = 000040
                                                                                                                       $$$ARG= 000002;
$$$T1 = 000067
$$$T2 = 000027
F$RCB= ********** G
                                                                                         T6FACT-
                                                                                                   ARRAGAR.
STOP -
          011064R
                              TMSG -
                                       001323R
                                                            T$RSET=:040000
                                                                                                   996299R
STRLEN= . 000027
                              TROCT.
                                       000202R
                                                            T$SC· = 0000022
                                                                                         T7ADDR:
                                                                                                   001230R
STUFF - - ****** GX-
STUFI - - ******* GX-
                              TRT.
                                       004344R
                                                            T$SCLK = 020000
                                                                                                 = · ******* GX
                                        011446R
                                                            T$SEG1 = . 000000
                                                                                         T7 I
                                                                                                 = · жжжжжж - G× ·
STUFO = ******* GX
                              T$AD: =:000020
                                                            T$SEG2=-000001
                                                                                                                       ...PC1= 003322R
...,PC2= 003524R
                                                                                         T70
                                                                                                 STUFT - ****** GX
                              T$BA - - 999992
                                                            T$SEG3=-000002
                                                                                         T7T
                                                                                                 = · жжжжжжж . GX ·
S.BFHD= 000020
                              T$BD - = 000010
                                                           T$SO: = 000001
                                                                                                   006210R
                                                                                                                       ...PC3= 003322R
                                                                                         Т8
                              T$BSO -- 100000
S.FATT= 000016
                                                            T$UBUS= 100000
                                                                                                   006240R
                                                                                                                       ...TPC=-000020
S.FDB - = - 000140
. ABS.
          000000
                       000
          011506
                       001
SRCOFF
          000122
                       002
FDSCOF
          000010
                       003
FNOFFS.
          000022
                       004
$$FSR1
          001020
                       005
ERRORS DETECTED:
                      Й
VIRTUAL MEMORY-USED: 7110 WORDS- (-28 PAGES)
DYNAMIC MEMORY: 8084 WORDS (31 PAGES)
ELAPSED TIME: 00:01:25
TMT, FMT/-SP=[20,13P,C,TMT
```

"拉斯" San

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Approved For Release 2005/07/13 CIA-RDP85-00514R000200020001-3
                                                                                       1-2--
TTEST- - M
              PO-M1110 27-MAR-80.15:41 PAGE-8
                                                             . FITLE . . TTEST . . . .
          000000
                                                            .PSECT TTEST
       2
      45678910
                                                            TERM DETECTOR MEMORY DIAGNOSTICS
                                                            TEST-ROUTINES-FOR-FSA'S-
      13
      14
15
                                                            THIS ROUTINE WRITES AND READS THE TEST PATTERN CONTAINED
                                                            IN "CKDATA"
      16
17
          000000
                                                  STUFF::
                                                                      2(SP).PREADD
PREADD.TD$TAW
      18
19
         000000
                    016667
                              000002. 000000G-
                                                            MOV
                   016767
004767
                              000000G 176362 1$:
                                                            MOV.
      20
21
22
23
          000014
                                                            JSR.
                                                                      PC.WRITE.
          000020
                    005267
                              000000G
                                                            INC
                                                                      PREADD.
                                                                      4(SP).PREADD
         000024
                    026667
                              000004 000000G
                                                                                          :CHECK FOR UPPER LIMITS
          000032
                    103365
                                                            BHIS
                                                                      1$
      24
25
26
         000034
000042
                                                                      2(SP),PREADD
2(SP),TD$TAW
                    016667
                              000002
                                        000000G
                                                            MOV-
                    016667
                              000002
                                        176362
                                                            MOV.
      27
28
          000050
                    004767
                                                  2$:
                              000464.
                                                            JSR
INC
                                                                      PC.READ
          000054
                    005267
                              000000G
                                                                      PREADD.
4(SP).PREADD.
      29
         000060
000066
                    026667
103370
                              000004 000000G
                                                            CMP
                                                                                          :CHECK - FOR - UPPER - LIMITS -
      30
                                                            BHIS
      31
          000070
                    000207
                                                            RTS.
                                                                      PC
      32
33
34
35
36
                                                            TEST-01
                                                            WRITE ADDRESS INTO ITSELF
      37
38
         000072
000072
      39
                              000002
000002.
                    016667
                                        000000G
                                                                      2(SP),CKDATA
2(SP),PREADD
PREADD,TD$TAW
                                                            MOM
                                                                                          ;ADDRESS IS TEST PATTERN.
      40
          000100
                    016667
                                        000000G
                                                            MOV
         000106
      41
                    016767
                              000000G 176362 1$:
                                                            MOV
      42
42
                    004767
                              000374:
                                                                      PC, WRITE
      43
          000120
                    005267
                              000000G
                                                            INC
                                                                      CKDATA:
      44
          000124
                    005267
                              000000G
                                                            INC
                                                                      PREADD.
      45
          000130
                    026667
                              000004: 000000G
                                                            CMP
                                                                      4(SP),PREADD
                                                                                          ; CHECK · FOR · UPPER · LIMITS
          000136
      46
                    103363
      47
      48
                              000002.
000002
          000140
                    016667
                                        ининия.
                                                            MOV.
                                                                      2(SP),CKDATA
                                                                                          ;ADDRESS IS TEST PATTERN
      49
          000146
                    016667
                                        000000G
                                                                      2(SP),PREADD
2(SP),TD$TAW
PC,READ
                                                            MOV-
         000154
000162
000166
                              000002
000352
      50
51
                    016667
                                        176362
                                                            MOV.
                   004767
005267
                                                            JSR
      52
53
54
55
                              000000G
                                                            INC
                                                                      CKDATA:
         000172
                    005267
                              000000G
                                                            THE
                                                                      PREADD.
         000176
000204
                   026667
103366
                              000004" 000000G
                                                            CMP
                                                                      4(SP), PREADD.
                                                                                          ;CHECK FOR UPPER LIMITS
                                                                      2$
PC
                                                            BHIS
                   000207
         000206
                                                            RTS -
```

```
TTEST- - MACRO - M1110 27-MAR-80 15:41 PAGE - 8-1
                                                                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
             58
59
                                                                                                                                     TEST-06
              60
                                                                                                                                    MEMORY-CROSS-TALK-TEST
              62
             63
                     000210
                                                                                                               T6F::
                                                                                                                                                                                                      SET LOOP COUNT

SET TEST PATTERN TO ALL 1'S

SET UP START ADDRESS

MOVE ADDR TO TRANSFER REG

WRITE CKNATA TO 3 SEGS.
              64
                                                                                                                                    MOV-
                                                                                                                                                           #10..R2
              65
                                                                                                                                                          #-1.CKDATA
2(SP).PREADD
PREADD.TD$TAW
                                                                                                                                    MOV.
             66
67
68
                                                                                                              :10$:
                                                                                                                                    MOV.
                                                                                                                                    MOV.
                                                                                                                                     JSR
              69
                                                                                                                                                           #2,PREADD.
                                                                                                                                    ADD.
                                                                                                                                                                                                       :SKIP AN ADDRESS
             70
71
73
74
75
77
78
79
                                                                                                                                     CMP
                                                                                                                                                                                                      FINISHED:
;NO, CONTINUE:
;SUB:FROM:LOOP:COUNT:
                                                                                                                                                          4(SP),PREADD
                                                                                                                                    BHIS
                                                                                                                                                           1$
                                                                                                                                    DEC -
                                                                                                                                                          R2
                                                                                                                                    BNE
                                                                                                                                                           10$
                                                                                                                                                                                                      CLR
                                                                                                                                                          CKDATA.
                                                                                                                                    MOV.
                                                                                                                                                          2(SP), PREADD.
                                                                                                                                     INC
                                                                                                                                                          PREADD, TD$TAW
                                                                                                                                    MOV
                                                                                                                                     JSR
                                                                                                                                                          PC, READ
              80
                                                                                                                                                           #2,PREADD.
                                                                                                                                    ADD.
             81
                                                                                                                                    CMP
                                                                                                                                                          4(SP).PREADD
                                                                                                                                                                                                       :FINISHED
              82
                                                                                                                                    BHIS
                                                                                                                                                           2$
                                                                                                                                                                                                       :NO:
                     000210 000207
                                                                                                                                    RTS -
                                                                                                                                                          PC.
             84
             85
             86
                                                                                                                                    TEST-07
             87
                                                                                                                                    WRITE/READ ALL ADDRESSES WITH ADDRESS COMPLEMENT
             88
             89
             90
                     000212
                                                                                                              T7F::
             91
                     000212
                                           016602
                                                                  000002
                                                                                                                                    MOV
                                                                                                                                                          2(SP),R2
                                                                                                                                                                                                       :LOAD ADDRESS
                                                                                                                                                                                                     ;LOHD-ADDRESS:
;SET-UP-START-ADDRESS:
;GET-ADDRESS-COMPLEMENT:
;SET-TEST-PATTERN:
;MOVE-ADDR-TO-TRANSFER-REG:
;WRITE-*CKDATA* TO 3 SEGS:
;BUMP-TO NEXT-ADDRESS:
;SET-R2-TO-NEXT-ADDRESS:
;FINISHED:
             92
                     000216
                                            016667
                                                                  000002 000000G
                                                                                                                                    MOV.
                                                                                                                                                          2(SP).PREADD
             93
                     000224
000226
                                            005102
                                                                                                                                     com-
                                            010267
                                                                  000000G+
                                                                                                                                    MOV.
                                                                                                                                                          R2.CKDATA
             95
                     000232
                                            016767
                                                                  000000G-176362-
                                                                                                                                    MOV.
                                                                                                                                                          PREADD, TD$TAW
             96
                     000240
000244
                                            004767
                                                                  000250
                                                                                                                                                          PC.WRITE
                                                                                                                                     JSR
             97
                                           005267
016702
                                                                  000000G.
                                                                                                                                     INC
                                                                                                                                                          PREADD.
             98
                     000250
                                                                  000000G
                                                                                                                                    MOV.
                                                                                                                                                          PREADD,R2
             99
                     000254
                                            026667
                                                                  000004 000000G
                                                                                                                                    CMP
                                                                                                                                                           4(SP), PREADD.
                                                                                                                                                                                                       :FINISHED.
           100
                     000262
                                            103360
                                                                                                                                    BHIS
                                                                                                                                                          1.5
                                                                                                                                                                                                       :NO. CONTINUE.
           191
                                                                                                                                                                                                      #MOVE.START.ADDRESS.TO.TRANS REG.
#SET.R2.=.ADDRESS.
#RESET.START.ADDRESS.
#GET.ADDRESS.COMPLEMENT.
#SET.TEST.PATTERN.
#READ.AND.COMPARE.
#BUMP.ADDR.
#SET.R2.=.NEXT.ADDRESS.
#FINISHED.
                     000264
           102
                                            016667
                                                                  000002.
                                                                                     176362
                                                                                                                                    MOV.
                                                                                                                                                          2(SP).TD$TAW
           103
                     000272
                                            016602
                                                                  000002
                                                                                                                                    MOV.
                                                                                                                                                          2(SP),R2.
2(SP),PREADD.
           194
                     000276
                                            016667
                                                                  000002
                                                                                       000000G
                                                                                                                                    MOV.
           105
                     000304
                                            005102
                                                                                                                                    COM
                     000306
                                                                  000000G
           106
                                            010267
                                                                                                                                                          R2.CKDATA
                                                                                                                                    MOV
           107
                     000312
                                            004767
                                                                  000222
                                                                                                                                     JSR
                                                                                                                                                          PC, READ.
           108 000316
                                            005267
                                                                  000000G
                                                                                                                                     INC
                                                                                                                                                          PREADD.
           109
                     000322
                                           016702
                                                                  000000G
                                                                                                                                    MOV-
                                                                                                                                                          PREADD, R2
           110
                     000326
                                           026667
                                                                  000004 000000G
                                                                                                                                    CMP .
                                                                                                                                                          4(SP),PREADD
                                                                                                                                                                                                       :FINISHED
          111 000334
112-000336
                                           103363
                                                                                                                                    BHIS
                                                                                                                                                          2$
                                                                                                                                                                                                       :NO-
                                                                                                                                                                                                                                                                      THE RESERVE OF THE PARTY OF THE
                                           000207
                                                                                                                                                          PC
           113
          114
                                                                                           Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
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R0 M1110 27-MAR-80 15:41 PAGE 8-2
Approved For Release 2005/07/11 IA-RDP85-00514R000200020001-3
115
116
                                                    ADDRESSING TEST
118
119 000340
    000340
128
              016667
                        999992
                                 000000G
                                                    MOM
                                                              2(SP),PREADD.
                                                                                 ;GET·START·ADDRESS
;GET·READ·PATTERN·
121
     000346
              016767
                        000000G/000000G-1$:
                                                    MGV.
                                                              CK2, CKDATA.
                        000000G 176362
122
    000354
              016767
                                                    MOV
                                                              PREADD, TD$TAW
123
    000362
              004767
                        000152
                                                              PC.READ
                                                     JSR
     000366
124
              016767
                        000000G · 000000G
                                                    MOV
                                                              CK3,CKDATA
                                                                                 :GET-WRITE-PATTERN
     000374
              016767
                        000000G-176362-
                                                    MOV
                                                              PREADD, TD$TAW
126
     000402
              004767
                        000106
                                                             PC.WRITE.
#1.PREADD
                                                     JER
127
     ййй4й6
              062767
                        000001
                                 000000G
                                                    ADD
    000414
              026667
                        000004
                                 000000G
                                                              4(SP), PREADD
     000422
               103351
                                                    BHIS
                                                              1$
139
    000424
              000207
                                                    RTS
                                                              PC
131
     000426
                                           T12FU::
133
     000426
              016667
                        000004
                                 000000G
                                                             4(SP).PREADD
CK2.CKDATA
                                                    MOS
                                                                                 :START-ADDRESS-=-UPPER-LIMIT
134
     000434
              016767
                        000000G 000000G 1$:
                                                    MOV.
                                                                                 : READ · PATTERN
     000442
              016767
                        000000G-176362-
                                                              PREADD, TD$TAW
                                                    MOV-
136
     000450
              004767
                        000064
                                                    JSR
MOV
                                                              PC, READ
    000454
000462
137
              016767
                        000000G .000000G
                                                              CK3, CKDATA
                                                                                 ; WRITE · PATTERN
138
              016767
                        000000G-176362-
                                                    MOV
                                                              PREADD, TD$TAW
     000470
              004767
                        000020
                                                     JSR
    000474
000502
148
               162767
                        000001
                                 000000G
                                                    SHB
                                                             #1,PREADD
2(SP),PREADD
141
              026667
003751
                                                    CMP
BLE
                        000002
                                 000000G
143
     000512
                                                    RTS
                                                              PC
144
145
146
147
148
                                                    WRITE SUBROUTINE....
149
              016767
016767
150
    000514
000522
                        000000G-176364
                                                             CKDATA.TD$TDW
                                                    MOV
151
                       000000G-176364
                                                    MOV
                                                              CKDATA, TD$TDW
    000530
              016767
                        000000G-176364
                                                    MOV
                                                              CKDATA, TD$TDW
153
154
     000536
              000207
                                                    RTS.
155
156
157
                                                    READ SUBROUTINE ...
158 000540
                                           READ:
    000540
                                                    SAVE
                                                              R1.R2.R3
     000540
              010146
                                                    MOV.
                                                             R1,-(SP)
R2,-(SP)
     ййй542
              010246
                                                    MÖV
     000544
              010346
                                                              R3_{\star} - (SP)
161
     000546
              016701
                                                    MOV.
                                                              TDSTDR,R1
    000552
              020167
001403
162
                        000000G
                                                    CMP
                                                             R1.CKDATA
163
    000556
                                                    BEQ.
                                                              1$
164
165
              004767
    000560
                       000100
                                                             PC.PRPERR
                                                    JER.
    000564
              000424
016701
                                                    ĐŘ.
                                                              READX.
166
167
    000566
                        176374.
                                          1$:
                                                    MOV-
                                                              TD$TDR,R1
    000572
              020167
                       000000G
                                                    CMP -
                                                             R1.CKDATA
168 000576
             001403
                                                    BEQ
                                  Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3...
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TTEST- M

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169 000600
              004767
                        000060
                                                               PC, PRPERR
                                                      JSR
              000414
                                                               READX
170
    000604
    000606
171
              016702
                                            2$:
                                                     MOV.
                                                               TD$TDR,R2
    000612
              016703
                        000000G
                                                     MOV
                                                               CKDATA,R3
173 000616
                        000777
              042702
                                                     BIC
                                                               #000777,R2
                                                                                   :CLEAR . 9 BITS
174
                        000777
    000622
              042703
                                                     BIC
                                                               #000777,R3
175
    000626
              020203
                                                               R2, R3
                                                     CMP
176
177
    000630
              001402
                                                     BEQ
    000632
              004767
                        000026
                                                      JSR.
                                                               PC,PRPERR
178
    000636
                                            READX:
                                                      RESTOR
                                                               R1,R2,R3
    000636
000640
              012603
012602
                                                      MOV.
                                                                (SP) + R3
                                                     \text{MOV} \cdot
                                                               (SP)+,R2
    000642
              012601
                                                     MOV.
                                                               (SP)+.R1
180
    000644
              000207
                                                     RT5
181
182
i 83
                                                     READ WITHOUT COMPARE
184
185
    000646
                                            READ1:
              016746
016716
016726
187
    000646
                        176374
                                                     MOV-
                                                               TD$TDR,-(SP)
    000652
188
                        176374
                                                     MOV
                                                               TD$TDR,(SP)
    000656
                        176374
                                                     MOV:
                                                               TD$TDR,(SP)+
198
    000662
                                                               PC.
191
192
193
                                                     PRE@ARE TO CALL ERROR ROUTINE
194
195
    000664
                                            PRPERR:
              016767
016767
196
    000664
                        000000G-000000G-
                                                      MOV-
                                                               PREADD, ERRADD
     000672
                        000000G 176362 000000G
                                                     MOV.
                                                               ERRADD,⊤D$TAW
                                                                                   :SET ERR ADDRESS
     000700
              012767
                                                     MOV.
                                                               #3,ERRCT
                                                                                   :SEGMENT COUNT:
199
    000706
              016767
                         176374
                                  000000G
                                                     MOV
                                                               TD$TDR, ERW1
                                                                                   :READ · SEGMENT · 0
:READ · SEGMENT · 1
                        176374
176374
288
    000,714
              016767
                                  000000G
                                                      MOV
                                                               TD$TDR,ERW2
201
    000722
              016767
                                  000000G
                                                      MOV
                                                               TD$TDR,ERW3
                                                                                   ; READ · SEGMENT · 2
    000730
              042767
                        000777
                                  000000G
                                                     BIC
                                                               #000777.ERW3
203
204
                                                      RETRY-READ
205
206
    000736
              012746
                        000005
                                                      MOSZ
                                                               #5,-(SP)
                                                                                   : NUMBER - OF - RETRIES
                                                               #3,-(SP)
ERRADD.TD$TAW
TD$TDR.-(SP)
     000742
               016767
                        000000G-176362-
                                                      MOV
208
    000750
               016746
                         176374
                                                      MOV
                                                                                   :READ SEG 1
                                                                                   ;SEG 2
    000754
              016746
016746
209
                         176374
                                                      MOV
                                                                TD$TDR,-(SP)
                        176374
    000760
210
                                                               TD$TDR,-(SP)
#000777,(SP)
                                                      MOV
     000764
               042716
                        000777
                                                      BIC
    000770
               022667
                        000000G
                                                      CMP
                                                                (SP)+,ERW3
                                                                                   :SAME AS PREVIOUS
:NO. ERROR UNPREDICTABLE
:SAME AS PREVIOUS
213
    000774
               001012
                                                      BHE
                                                               1$
    000776
001002
214
               022667
                        000000G
                                                                (SP)+,ERW2
215
               001011
                                                      BNE
                                                               2$
                                                                                   :NO-
216
217
    001004
                        000000G
                                                      CMP
                                                               (SP)+,ERW1
                                                                                   :SAME
    001010
              001010
                                                      BNE
                                                                                   :NO
218
    001012
              005316
                                                               (SP)
RR1
                                                      DEC
                                                                                   ;SUB FROM + RETRIES
              001352
005726
219 001014
                                                      BNE
220 001016
                                                                (SP)+
221 001020
              000411
                                                      BR
                                                               CALLER-
                                                                                   :CALL · ERROR · REPORTING · ROUTINE
                                   Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
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TTEST- . . M PO:M1110 27-MAR-80 15:41 PAGE:8-4 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 223 001022 224 001026 225 001032 226 001036 227 228 001044 229 001050 062706 062706 062706 012767 000002 000002 000002 177777: 000000G #2,SP. #2,SP. #2,SP. #-1,ERRCT. ADD -ADD -ADD -MOV -1\$: 3\$∶ : INDICATE · UNPREDICTABLE · RESULTS · 004767 000207 JSR -RTS -00000G CALLER: PC.MEMERR

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TTEST - MACRO M1110 27-MAR-80 15:41 PAGE_9
                                          Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     231
232
233
234
235
                                                              INPUT BUFFER TESTS
     236
                                                              WRITE AND READ THE TEST PATTERN.
     237
         001052
001052
                    016667
                               000002
                                        000000G
                                                                        2(SP),PREADD
                    016701
016711
012767
     240
          001060
                               000000G
                                                              MOM
                                                                        PREADD.R1
     241
          001064
                               000000G
                                                                        CKDATA, (R1)
          001070
                              000000
000002
                                                              MOV:
                                                                        #0.TD$SW.
     243
          001076
                    062767
                                         000000G
                                                                        #2,PREADD
4(SP),PREADD
                                                              ADD
     244
         001104
001112
                    026667
103362
                               000004
                                                              CMP
     245
                                                              BHIS
     246
     247
          001114
                    016667
                               000002
                                         000000G
                                                              MOV
                                                                        2(SP),PREADD
PC,READI
     248
         001122
001126
                    004767
026667
                              000416
000004:
                                                              JSR.
                                        000000G
                                                              CMP
                                                                        4(SP) PREADD
     250 001134
                     103372
                                                             BHIS
RTS:
     251
         001136
                    000207
     252
     253
254
                                                              TEST-01
     255
                                                             WRITE ADDRESS INTO ITSELF
     256
                                                   Ť1I::
     258
          001140
     259
                    016667
016767
016701
          001140
                              000002: 000000G
                                                             MOM-
                                                                        2(SP).PREADD
          00114E
     260
                              000000G 000000G 1$:
                                                                        PREADD, CKDATA
PREADD, R1
                                                             MOV.
                                                             MOV
                    016711
012767
062767
     262
         001160
                               000000G
                                                             MOV.
                                                                        CKDATA, (R1)
     263
         001164
                              000000
                                                                        #0.TD$SW
#2.PREADD
     264
         001172
                              000002
                                        000000G
                                                             ADD
     265
         001200
                    026667
                              000004
                                        000000G
                                                             CMP
                                                                        4(SP), PREADD
                                                                                             ; CHECK · FOR · UPPER · LIMITS ·
    266
267
         001206
                    103357
                                                             BHIS
     268
         001210
                    016667
                              000002 000000G
                                                             MOV.
                                                                        2(SP),PREADD
                              000000G · 000000G · 2$:
    269
270
         001216
                    016767
                                                             MOV.
JSR:
                                                                        PREADD, CKDATA
                                                                                            :ADDRESS IS PATTERN.
         001224
001230
                    004767
                              000314
                                                                        PC.READI
4(SP).PREADD
                    026667
                              000004 '000000G
                                                             CMP
                                                                                             ;CHECK · FOR · UPPER · LIMITS
    272.001236
273 001240
                    103367
                                                             BHIS
RTS
                                                                        2$
PC
                    000207
    274
275
    276
277
278
                                                             TEST-06
MEMORY-CROSS-TALK-TEST
    280 001242
                                                   Ť6I::
                                                                       #10.,R2.
#-1,CKDATA.
2(SP),PREADD.
PREADD.R1
CKDATA.(R1)
    281
                                                             MOV-
                                                                                             :SET-LOOP-COUNT-
    282
                                                                                            :SET · TEST · PATTERN · TO · ALL · 1'S
:SET · UP · START · ADDRESS ·
    283
                                                   ;10$:
                                                             M0 v -
    284
285
                                                             MOV.
                                                   :15:
                                                                                             :LOAD ADDRESS
                                                             MÔV.
                                                                                                                                             MOV:
    287
                                                                                                                                                    33
                                                             ADD
                                                                        #4.PREADD
                                                                                            :SKIP AN ADDRESS
                                          Approved For Release 2005/07/1
                                                                                 CIA-RDP85-00514R000200020001-3
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R0 M1110 27-MAR-80 15:41 PAGE 9-1
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
TTEST- . . M
     288
                                                              EMP
                                                                        4(SP), PREADD
                                                                                             :FINISHED
     289
                                                             BHIS.
                                                                        1$
                                                                                             :NO, CONTINUE
     29A
                                                              DEC
                                                                        R2.
                                                                                             :SUB FROM LOOP COUNT
     29 î
                                                              BNE
                                                                        10$
     293
                                                                        CKDATA.
2(SP).PREADD.
#2.PREADD.
                                                              CLR
                                                                                            :SET:TEST:PATTERN:TO:ZERO
:RESET:START:ADDRESS:
     294
                                                             MOV
                                                              ADD
     296
                                                                        PC,READI.
                                                   :2$:
                                                              JSR
                                                                                            :READ-AND-COMPARE:
:BUMP-TO NEXT-ADDR (SKIP-ONE)
     297
                                                             ADD
                                                                        #2,PREADD
     298
                                                             CMP
                                                                        4(SP),PREADD
                                                                                            :FINISHED
     299
                                                             BHIS
                                                                        2$
                                                                                            ;NO:
     300 001242 000207
                                                             RTS
                                                                        РC
     301
     302
     303
                                                             TEST-07
    304
305
                                                             WRITE/READ ALL ADDRESSES WITH ADDRESS COMPLEMENT
     306
     307
          001244
     308
         001244
                    016602.
                              000002
                                                                       2(SP),R2.
2(SP),PREADD.
                                                                                            :SET-R2-=-ADDRESS
:SET-UP-START-ADDRESS-
:GET-ADDRESS-COMPLEMENT-
                                                             MOV.
     309 001250
                    016667
                              000002 000000G
                                                             MOV.
     310
         001256
                    005102
                                                             COM-
                                                                        R2 -
          001260
                    010267
                              000000G
                                                                       R2,CKDATA
                                                             MOV
                                                                                            SET TEST PATTERN = ADDRESS COMPLEMENT
    312.001264
313 001270
314 001274
                    016701
                              000000G
                                                             MOV
                                                                        PREADD, R1
                                                                                            :LOAD ADDRESS
                    016711
                              000000G
                                                             MOV
                                                                        CKDATA, (R1)
                    012767
062767
                              000000 : 176376
                                                             MOV
                                                                        #0.TD$SW.
#2.PREADD
    315
         001302
                              000002
                                       000000G
                                                             ADD
    316
317
         001310
                    016702
                              000000G
                                                             MOV.
                                                                        PREADD, R2
                                                                                            :SET-R2-=-ADDRESS
:FINISHED-
         001314
001322
                    026667
                              000004 000000G
                                                                        4(SP),PREADD
    318
                    103355
                                                             BHIS
                                                                                            :NO, CONTINUE
     319
    320
         001324
                    016602
                              000002
                                                             MOV-
                                                                       2(SP),R2
                                                                                            :SET-R2-=-ADDRESS
:RESET-START-ADDRESS-
:GET-ADDRESS COMPLEMENT-
    321 001330
322-001336
                    016667
                              000002 000000G
                                                                       2(SP),PREADD
R2
R2,CKDATA
                                                             MOV.
                    005102
                                                             COM-
     323
         001340
                    010267
                              000000G
000174
                                                             MOV.
                                                                                            SET TEST-PATTERN = ADDR COM
READ AND COMPARE
SET R2 = NEXT ADDRESS . ...
    324
325
         001344
                    004767
                                                             JSR.
                                                                       PC.READI
         00135A
                    016702
                              000000G
                                                                       PREADD, R2.
4(SP), PREADD
                                                             MOV:
    326
327
         001354
                   026667
103365
                              000004 000000G
                                                             CMP
                                                                                            :FINISHED
         001362
                                                             BHIS
                                                                                            : NO:
    328 001364
                   000207
                                                             RTS.
                                                                       PC.
    329
330
    331
                                                             TEST-12-
    332 ·
333
                                                             ADDRESSING TEST
    334
                                                   :
T12ID::
    335
         001366
    336 001366
                   016667
                              000002
                                        000000G
                                                                                            :GET-START-ADDRESS
:LOAD-READ-ADDRESS
:READ-DATA-
                                                             MOV
                                                                       2(SP), PREADD.
    337
         001374
                   016701
                              000000G -
                                                   1$:
                                                             MOSA
                                                                       PREADD, R1
    338
         001400
                   011101
                                                             ΜŎΥ
                                                                       (R1),R1
    339 001402
                   026701
                                                                                            COMPARE AGAINST PATTERN
                              000000G :
                                                             CMP
                                                                       CK2.R1
    340
        001406
                   001402
                                                             REQ.
                                                                        . +6
    341
        001410
                   004767
                             000166
                                                                       PC PRPER1
                                                             JSR
    342
        001414
    343
                   016701
                             000000G
                                                             MOV.
                                                                       PREADD,R1
    344 001420
                  016711
                             000000G
                                                            MG-2-
                                                                       CK3, (R1)
                                                                                            :WRITE - PATTERN
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-26
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TTEST----MACRO-M1110 27-MAR-80 15:41 PAGE 50-2
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    345 001424
                   012767
                             000000
                                                                    #0,TD$SW
#2,PREADD
4(SP),PREADD
                                                          MOV
    346
                  062767
026667
         001432
                             000002
                                      .000000G
                                                          ADD
    347
         001440
                             000004
                                      000000G
                                                          CMP
    348
         001446
                   103352
                                                          BHIS
                                                                    1$
    349 001450
                   000207
                                                          RTS
                                                                    PC.
    350
    351
         001452
                                                T12IU::
    352-001452
353 001460
                   016667
                             000004
                                      .000000G
                                                          MOV
                                                                    4(SP),PREADD
                                                                                       :START-ADDRESS-=-UPPER-LIMIT
         001460
                   016701
                             000000G
                                                1$:
                                                          MOV.
                                                                    PREADD, R1
    354
         001464
                  011101
012767
                                                          MOÝ
                                                                    (R1).R1
         001466
                             000000 176376
                                                          MOV
                                                                   #0.TD$SW
CK2.R1
    356
357
                   026701
         001474
                             000000G
                                                          CMP
                   001402
         001500
                                                          BEQ
                                                                   .+6
PC.PRPER1
    358
         001502
                   004767
                             000074
                                                          JSR
    360
         001506
                   016701
                             000000G
                                                          MOV
                                                                   PREADD, R1
    361
362
        001512
001516
                  016711
012767
                             000000G
                                                          MOV.
                                                                   CK3,(R1)
#0,TD$SW
                                                                                       : WRITE PATTERN
                             000000
000002
                                       176376
                                                          MOV
    363
                   162767
                                      пававава
                                                          SUB
                                                                    #2,PREADD
                                                                                       : BACK - UP
    364 001532
365 001540
                   026667
                             000002
                                      000000G
                                                          CMP
                                                                   2(SP), PREADD
                   191747
                                                          BLOS
                                                                    1$
         001542
                   000207
    367
368
    369
                                                          READ - AND - COMPARE - ROUTINE
    370
371
    372 - 001544
                  016701
                             000000G --
                                                READI:
                                                          MOV
                                                                   PREADD, R1
    373
         001550
                  011101
                                                                   (R1),R1
#0,TD$SW
                                                          MOV
    374 001552
                   012767
                            000000 -176376
                                                          MOV.
    375
         001560
                   026701
                             000000G
                                                          CMP
                                                                   CKDATA,R1
    376
         001564
                   ÑÑ 1402
                                                                    .+6
    377
        001566
                   004767
                            000010
                                                          JSR
                                                                   PC.PRPER1
    378 001572
379 001600
                   062767
                            000002 000000G
                                                          ADD
                                                                   #2,PREADD
                  000207
    380
    381
    382
383
                                                          INPUT-BUFFER ERROR-PREPARATION-ROUTINE
    384
    385
        001602
                                                PRPER1:
         001602
                                                         SAVE
                                                                   R1.R2.R3
         001602.
                  010146
                                                         MOV.
                                                                   R1,-(SP)
R2,-(SP)
         001604
                  010246
                                                         MOV.
         001606
                  010346
                                                                   R3,-(SP)
    388
        001610
                  016767
                            000000G:000000G
                                                         MOV.
                                                                   PREADD, ERRADD
        001616
001624
                  012767
    389
                            000001 000000G
                                                         MOV.
                                                                   #1.ERRCT
    390
                  016701
                            000000G
                                                         MOV.
                                                                   PREADD, R1
    39 i
        001630
                  011167
                            000000G
                                                         MOV
    392
393
                                                         RETRY-
    394
        001634
    395
                  012702
                                                                                      HUMBER OF RETRIES
                                                         MOV
                                                                   #5,R2
        001640
001642
    396
                  011103
026703
                                               1$:
                                                         MOV
                                                                   (R1),R3
                            00000AG
                                                         CMP -
                                                                   ERW1,R3
    398
        001646
```

BNE

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A BOOK STORY

R0-M1110 27-MAR-80 15:41 PAGE 9-3 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 399 001650 400 001652 005302 001372 DEC ···· R2· BNE· 1\$ 401 001654 402 000403 3\$; 177777 000000G 2\$: 000000G 3\$: MOV. JSR. 403 001656 012767 #-1.ERRCT ; INDICATE · UNPREDICTABLE, RESULTS 404 00166**4** 405 004767

RESTOR MOV: MOV: MOV:

RTS:

R1,R2,R3 (SP)+,R3 (SP)+,R2 (SP)+,R1 PC

TTEST- ... M

405 406 001670 001670 001672 001674 407 001676

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```
TTEST MACRO M1110 27-MAR-80 15:41 PAGE 10 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      409
     410
     411
                                                                 TEST - ROUTINES - FOR - OUTPUT - BUFFER
     413
     414
                                                                 THIS-ROUTINE WRITES-AND-READS-THE-TEST-PATTERN-CONTAINED IN "CKDATA:
      415
     416
     417
           001700
                                                      STUFO::
          001700
                                000000
                                                                           #0.TD$SW
2(SP).PREADD
PC.WRITEO
      418
                      012767
                                           176376
                                                                 MOV
                                                                                                 :RESET-TERM-DETECTOR
           001706
                                           000000G
                      016667
                                000002
                                                                 MOV.
      420 001714
                      004767
                                000420
                                                                 JSR
                                                                                                 ;WRITE OUTPUT BUFFER
      421 001720
                                                                 CMP
                      026667
                                000004
                                           000000G
                                                                            4(SP),PREADD
                                                                                                 : CHECK FOR UPPER LIMITS
      422
           001726
                      103372
                                                                 BHIS
                                                                            1$
      423
      424
           001730
                      016667
004767
                                000002
                                           000000G
                                                                 MOV-
                                                                            2(SP).PREADD
      425
           001736
                                999436
                                                      2$:
                                                                 JSR CMP
                                                                            PC.READO.
                                                                                                 :READ AND COMPARE:
:CHECK FOR UPPER LIMITS
           001742
                      026667
                                0000004
                                           000000G
                                                                            4(SP),PREADD
      427
           001750
                                                                 BHIS
                                                                            2$
      428
           001752
                      000207
                                                                 RTS
      429
      430
      431
                                                                 TEST-01
      432
                                                                 WRITE ADDRESS INTO ITSELF
      433
      434
      435
           001754
001754
                                                      T10::
      436
                      012767
                                000000
                                           176376
                                                                 MOV
                                                                            #0.TD$SW.
                                                                                                 :RESET.TERM.DETECTOR
           001762
      437
                      016667
                                000002
                                           000000G
                                                                 MOV
                                                                           2(SP),CKDATA
                                                                                                 :ADDRESS IS TEST PATTERN
      438
           001770
                      016667
                                000002
                                           000000G
                                                                 MOV
                                                                           2(SP) PREADD
           001776
                      004767
      439
                                000336
                                                                           PC.WRITEO
                                                                 JSR
                                                                                                 #WRITE: OUTPUT: BUFFER:
#BUMP: TO NEXT: PATTERN: (ADDRESS)
#CHECK: FOR: UPPER: LIMITS:
      449
          002002
002010
                      062767
026667
                                0000023
                                           :000000G
                                                                 ADD.
                                                                            #2,CKDATA
      441
                                000004: 0000000G
                                                                 CMP
                                                                            4(SP), PREADD
           002016
      442
                      103367
                                                                 BHIS
      443
                                                                           2(SP).CKDATA
2(SP).PREADD
      444
           002020
                      016667
                                000002
                                           000000G
                                                                 MOV
                                                                                                 :SET-TEST-PATTERN-=-ADDRESS
      445
           002026
                      016667
                                000002
                                           000000G
                                                                 MOV
           002034
                      004767
                                000340
                                                     2$:
                                                                 JSR
                                                                           PC, READO.
                                                                                                 READ AND COMPARE
      447
           002040
                      062767
                                000002
                                           000000G
                                                                 ADD
                                                                            #2,CKDATA
                                                                                                 CHANGE ADDRESS (PATTERN)
CHECK FOR UPPER LIMITS
                      026667
103367
      448
           002046
                                000004
                                           000000G
                                                                 CMP
                                                                            4(SP).PREADD
           002054
                                                                           2$
PC
                                                                 BHIS
      450 002056
                                                                 RTS
      451
      452
                                                                 .TEST - <mark>06</mark>
MEMORY - CROSS - TALK - TEST
      453
      454
      455
      456
      457
           002060
                                                      TED::
      458
                                                                 MOV
                                                                                                 RESET.TERM.DETECTOR.
SET.LOOP.COUNT.
SET.TEST.PATTERN.TO.ALL.1'S
                                                                            #0.TD$SW
                                                                           #10.,R2.
#-1.CKDATA.
2(SP).PREADD
     459
                                                                 MOV-
      460
                                                                 MOV.
                                                                                     READD SET IEST FHITERN ID ALL
READD SET UP START ADDRESS
EO SWRITE OUTPUT BUFFER
DD SKIP AN ADDRESS
READD FINISHED NO CONTINUE
CIA-RDP85-00514R000200020001-3
     461
462
                                                      :10$:
                                                                 MOV
                                                      ;1$:
                                                                 JSR
                                                                           PC, WRITEO
     463
                                                                                                                                      化金属性的基础。在2010年1月1日 1月1日 1日 1日
                                                                 ADD
                                                                           #2,PREADD
     464
                                                                           4(SP), PREADD
     465
                                                                 BHIS
```

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TTEST- · ·
                         27-MAR-80 15:41 PAGE 10-1
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               0 · M1110
     466
                                                                                         ;SUB·FROM·LOOP·GGUNT·
     467
                                                           BNE -
                                                                     10$
     468
     469
                                                           01.8
                                                                     CKDATA.
2(SP),PREADD.
                                                                                         :SET.TEST.PATTERN.TO.ZERO
                                                           MOV
                                                                                         :RESET START ADDRESS:
:START AT NEXT ADDRESS
     471
                                                                     #2,PREADD
                                                           ADD
     472
                                                  :2$:
                                                           JSR
                                                                     PC,READO
                                                                                         :READ · AND · COMPARE
     473
                                                                                         ;BUMP · ADDR · (SKIP · ONE)
                                                           ADD
                                                                     #2.PREADD
     474
                                                           CMP
                                                                     4(SP), PREADD
                                                                                         :FINISHED
     475
                                                           BHIS
                                                                     2$
                                                                                         : NO
         002060 000207
     476
                                                           RTS
     477
     478
     479
                                                           TEST-07
     480
                                                           WRITE/READ ALL ADDRESSES WITH ADDRESS COMPLEMENT
     481
     482
         002062
002062
     483
                                                  T70::
     484
                    012767
                             000000
                                      \pm 176376
                                                           MOV
                                                                     #0.TD$SW
                                                                                         :RESET-TERM-DETECTOR
     485
          002070
                    016602
                             000002
                                                           MOV
                                                                                         #SET R2 = ADDRESS
#SET UP START ADDRESS
#GET ADDRESS COMPLEMENT
                                                                     2(SP),R2
                                       000000G
     486
          002074
                    016667
                             0000023
                                                           MOV
                                                                     2(SP),PREADD
     487
          002102
                    005102
                                                 1$:
                                                           COM-
     488
          002104
                    010267
                             000000G
                                                                     R2.CKDATA
                                                           MOV
                                                                                         SET TEST PATTERN = ADDRESS COMPLEMENT
                                                                                         :WRITE OUTPUT BUFFER
:SET R2 = NEXT ADDRESS
     489
         002110
                    004767
                             000224
                                                           JSR
                                                                     PC.WRITEO
     490 002114
491 002120
                   016702
                             000000G.
                                                           MOV
                                                                     PREADD, R2
                             000004 000000G
                   026667
                                                           CMP
                                                                     4(SP), PREADD
                                                                                         ;FINISHED
     492
         002126
                    103365
                                                           BHIS
                                                                     15
                                                                                         :NO, CONTINUE
     493
     494
         002130
                    016602
                             000002
                                                           MOV
                                                                                         :SET R2:=:ADDRESS
:RESET:START:ADDRESS
                                                                     2(SP),R2
     495
         002134
                    016667
                             000002
                                       000000G
                                                           MOW-
                                                                     2(SP).PREADD
     496
          002142
                   005102
                                                                                         GET ADDRESS COMPLEMENT
SET TEST PATTERN = ADD
                                                 2$:
                                                           COM
                                                                     R2 ·
          002144
     497
                    010267
                             000000G
                                                                     R2.CKDATA
                                                           MOV
                                                                                                               = · ADDR · COM
     498
         002150
                    004767
                             000224
                                                           JSR
                                                                     PC.READO.
                                                                                         :READ AND COMPARE :
:SET-R2 = NEXT ADDRESS
     499
         002154
                    016702
                             000000G
                                                           MOV
                                                                     PREADD, R2
                   026667
     500
         002160
                             999994
                                       ABBBBBB
                                                           CMP
                                                                     4(SP).PREADD
                                                                                         :FINICHED
     50 i
         002166
                    103365
                                                           BHIS
                                                                     2$
                                                                                         :NO
                                                                     ΡĊ
     502.002170
                   000207
                                                           RTS
     503
     504
     505
                                                           TEST-12-
     506
507
                                                           ADDRESSING TEST
     508
     509
         002172
    510
511
         002172
                   012767
                             000000
                                        176376
                                                           MOV
                                                                     #0.TD$SW
                                                                                         :RESET-TERM-DETECTOR
     511 002200
512 002206
                   016667
                             000002
                                       000000G
                                                           MOV.
                                                                     2(SP), PREADD
                                                                                         GET START ADDRESS
                             000000G-000000G-1$:
                   016767
                                                           MOV
                                                                     CK2, CKDATA
                                                                                         GET READ PATTERN
     513
         002214
                   004767
                             000160
                                                           JSR
                                                                     PC, READO:
                                                                                         :READ AND COMPARE
    514 002220
515 002226
                    162767
                             000002
                                       000000G
                                                           SUB
                                                                     #2.PREADD
                                                                                         :WRITE AT SAME ADDRESS
:GET WRITE PATTERN
:WRITE OUTPUT BUEER
                   016767
                             000000G · 000000G ·
                                                           MOV
                                                                     CK3,CKDATA
     516
         002234
                             000100
                   004767
                                                           ISR
                                                                     PC.WRITEO.
    517
518
         002240
                   026667
                             000004
                                                           CMP
                                                                     4(SP),PREADD
         002246
                   103357
                                                           BHIS
                                                                     1$
    519 002250
                   000207
                                                           RTS.
                                                                     PΓ
    521 002252
                                                 T120U::
    522.002252. 012767
                             000000
                                       176376
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TTEST- - - MACRO - M1110 27-MAR-80 15:41 PAGE - 10-2-
                                         Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     523 002260
                                                                                          :START ADDRESS -- UPPER LIMIT
:READ PATTERN
                    016667
                              000004
                                        000000G
                                                            MOV
                                                                      4(SP),PREADD.
     524 002266
                    016767
                              000000G-000000G-1$:
                                                            MOV.
                                                                      CK2, CKDATA
                    004767
                                                                                          READ AND COMPARE
BACK UP TO SAME ADDRESS
         002274
                              000100
000002
     525
                                                            JSR.
                                                                      PC, READO
     526
          002300
                    162767
                                        000000G
                                                                      #2.PREADD
CK3.CKDATA
                                                            SHB
                                                                                          ;BHCK-UP TO SHME HDDK
;WRITE-PATTERN;
;WRITE-OUTPUT BUFFER;
;BACK-UP 1 ADDRESS
          002306
                    016767
                              000000G - 0000000G
                                                            MOV
     528 - 002314
                    004767
162767
                              000020
                                                            JSR
                                                                      PC, WRITEO.
          002320
     529
                              999994
                                        папапапа.
                                                            SHB
                                                                      #4,PREADD.
     530
          002326
                    026667
                                        000000G
                              000002
                                                            CMP
                                                                      2(SP), PREADD.
     531 002334
532 002336
                    003754
                                                            BLE
                                                                      1$
                    999297
                                                                      РĊ
     534
     535
     536
                                                            WRITE-OUTPUT BUFFER-
     537
     538
                    012767
016767
     539
          002340
                              000032 : 176362 -
                                                  WRITEO:
                                                                      #T$OBWA,TD$TAW
                                                                                         :SET-UP-MEMORY-ADDRESS REG
     540
          002346
                              000000G-176364
                                                            MOV-
                                                                      PREADD, TD$TDW.
                                                                                          SET OF MANSFER CODE
          002354
                    012767
     541
                              000036 176362
                                                            MOV.
                                                                      #T$OB, TD$TAW.
          002362
                    016767
     542
                              000000G-176364
                                                            MOV.
                                                                      CKDATA, TD$TDW-
                                                                                          :WRITE OUTPUT BUFFER A
     543
          002370
                    062767
                              000002 000000G
                                                                      #2,PREADD
                                                            ADD:
     544
          002376
                    000207
                                                            RTS
     545
     546
     547
                                                            READ - AND - COMPARE -
     548
     549
     550
          002400
                                                  READO:
                                                                      #T$OBRA,TD$TAW
PREADD,TD$TDW
     551
          002400
                    012767
                              0000341 176362
                                                            MOV
                                                                                          :SET-UP-READ ADDRESS
                                                                                          ADDRESS TO READ:
SELECT OUTPUT BUFFER
     552
          002406
                    016767
                              000000G·176364
                                                            MOV-
     553
          002414
                    012767
                              000036
176374
                                       176372
                                                            MOV-
                                                                      #T$OB, TD$TAR
          002422
                    016701
                                                            MOV.
                                                                      TD$TDR,R1
                                                                                           READ OUTPUT BUFFER
     555
          002420
                    026701
                              000000G
                                                            CMP
                                                                      CKDATA, R1
     556
          002432
                    001402
                                                            BEQ
                                                                       +6
                                                                                          :OK. CONTINUE.
          002434
                    004767
                                                                      PC, PRPERO
                              000010
                                                            TSR
     558
          002440
                    062767
                              000002
                                        1000000G
                                                            ADD
                                                                      #2,PREADD
                                                                                          :ADVANCE ADDRESS:
     559
          002446
                    000207
     560
     561
     562
                                                            PREPARE · ERROR · LIST ·
     563
     564
          002450
                                                  PRPERO:
          002450
002450
     566
                                                            SAVE
                                                                      R1.R2.R3
                    010146
                                                                      R1.-(SP)
R2.-(SP)
                                                            MOV:
          002452
                    010246
                                                            MOV.
          002454
     567
                    016767
012767
     568
          002456
                              000000G - 000000G -
                                                            MOV.
                                                                      PREADD, ERRADD
          002464
                                                                                         PRINT ONE WORD
SET UP READ ADDRESS
ADDRESS TO READ
SELECT OUTPUT BUFFER
     569
                              000001
                                        000000G
                                                            MOV
                                                                      #1, ERRCT
                    012767
                                                                      #T$OBRA,TD$TAW
PREADD,TD$TDW
     570 002472
                              000034
                                        176362
                                                            MOV-
     571 002500
572 002506
                    016767
                              000000G-176364
                                                            MOV.
                    012767
                                                            MOV-
                                                                      #T$OB,TD$TAR
TD$TDR,ERW1
                              000036
                                        176372
     573 002514
                    016767
                              176374
                                        000000G
                                                                                          READ OUTPUT BUFFER
     574
575
576
```

RETRY-

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事業有

80-M1110 27-MAR-80 15:41 PAGE-10-3 TTEST . . . M Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 577 002522 578 002526 579 002534 012702 000005 MOV-#5,R2. : NUMBER - OF - RETRIES 000034 176362 1**\$**: ;SELECT: OUTPUT: BUFFER: ;SELECT: OUTPUT: BUFFER: ;READ: OUTPUT: BUFFER: #T\$OBRA, TD\$TAW PREADD, TD\$TDW #T\$OB, TD\$TAR 012767 MOV. 016767 580 002542 012767 000036 -176372 MOV. 002550 016703 176374 MOV TD\$TDR,R3 R3,R1 2\$ R2 1\$ 582 · 002554 583 · 002556 020301 001003 CMP BNE :NOT-THE SAME-ERROR 584 002560 585 002562 586 002564 005302 001361 BNE 000403 BR 3\$:REPORT ERROR 002566 002574 588 589 177777 : INDICATE UNPREDICTABLE RESULTS 012767 000000G·2\$: MOV-#-1.ERRCT 000000G-PC, MEMERR 004767 3\$: JSR-590 R1,R2,R3 (SP)+,R3 (SP)+,R2 (SP)+,R1 002600 002600 002602 59 i RESTOR 012603 012602 MOV: MOV: MOV: 002604 012601 592 002606 000207 RTS PĈ.

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TTEST - MACRO M1110 27-MAR-80 15:41 PAGE 11
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    594
    595
     596
                                                         TEST-ROUTINES-FOR-BYTE TRANSLATOR-
     597
    598
     599
                                                         THIS ROUTINE WRITES AND READS THE TEST PATTERN CONTAINED IN "CKDATA".
    600
    691
    602-002610
                                               STUFT::
                  012767
    603
         002610
                            равава
                                     176376
                                                         MOV-
                                                                  #0,TD$SW
                                                                                     : RESET - TERM - DETECTOR -
    604
         002616
                   016667
                            000002
                                     000000G
                                                         MOV-
                                                                  2(SP),PREADD
    605
         002624
                   004767
                            000414
                                                         JSR
                                                                  PC, WRITET
                                               1$:
                                                                                      : WRITE · BYTE · TRANS
    606
         002630
                   026667
                            0000043
                                     000000G
                                                         CMP
                                                                  4(SP), PREADD
                                                                                      607
         002636
                   103372
                                                         BHIS
    608
    609
         002640
                   016667
                            000002
                                     000000G
                                                         MOV-
                                                                  2(SP),PREADD
    610
         002646
                   004767
                            000432
                                                         JSR.
                                                                  PC, READT
                                                                                     :READ AND COMPARE :CHECK FOR UPPER 七种干S 网络阿里克拉克
    611
         002652
                   026667
                            000004
                                     000000G
                                                         CMP
                                                                  4(SP), PREADD
    612-002660
                   103372
                                                         BHIS
                                                                  2$
PC:
    613
                   000207
                                                         RTS
    614
    615
                                                         TEST-01
    616
                                                         WRITE ADDRESS INTO ITSELF
    618
    619
    620
         002664
                                               T1T::
    621
         002664
                   012767
                            000000
                                                                  #0.TD$SW.
                                      176376
                                                         MOV
                                                                                     :RESET-TERM-DETECTOR-
:ADDRESS IS-TEST-PATTERN
                                                                  2(SP),CKDATA
2(SP),PREADD
    622-002672-
623-002700
                  016667
016667
                            000002
                                     000000G
                                                         MOV
                            000002
                                     .000000G
                                                         MOV:
    624 002706
                   004767
                            000332
                                                                  PC.WRITET
                                                         JSR.
                                                                                     : WRITE - BYTE - TRANS
    625 002712
626 002716
                   005267
                            000000G
                                                         INC
                                                                  CKDATA:
    626
627
                   026667
                            000004 000000G
                                                         CMP
                                                                  4(SP), PREADD
                                                                                     :CHECK · FOR · UPPER · LIMITS ·
         002724
                   103370
                                                         BHIS
                                                                  1$
    628
                                                                  2(SP).CKDATA
2(SP).PREADD
    629
         002726
                   016667
                            000002
                                     000000G
                                                         MO V
                                                                                     :SET-TEST-PATTERN- = - ADDRESS
         002734
002742
                  016667
004767
    630
                            000002
                                     000000G
                                                         MOV-
    631
                            000336
                                               2$:
                                                         JSR.
                                                                  PC, READT
                                                                                     :READ AND COMPARE
    632 - 002746
                   005267
                            000000G
                                                         THO
                                                                  CKDATA:
    633 002752
                            000004 000000G
                   026667
                                                         CMP
                                                                  4(SP), PREADD.
                                                                                     :CHECK · FOR · UPPER · LIMITS
    634 002760
                   i03370
                                                         BHIS
                                                                  2$
    635 002762
                  000207
                                                         RTS.
                                                                  PC
    636
637
    638
                                                         TEST-06
                                                                                                                     to the second
    639
                                                         MEMORY · CROSS-TALK · TEST
    640
    641
    642 - 002764
                                               T6T::
    643
                                                         MOV-
                                                                  #0.TD$SW
                                                                                     :RESET - TERM - DETECTOR -
    644
                                                         MOV.
                                                                                     SET LOOP COUNT
SET TEST PATTERN TO ALL 1'S
                                                                  #10..R2
    645
                                                                  #-1,CKDATA
2(SP),PREADD
    646
                                               :10$:
                                                         MOV
                                                                                     SET UP START ADDRESS

WRITE CHARTE PROPERTY STARTS

SKIP AND ADDRESS

FINISHED
    647
                                               :1$:
                                                         JSR
                                                                  PC.WRITET
    648
                                                         THE
                                                                  PREADD.
4(SP),PREADD.
    649
                                                         CMP
    650
                                       Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
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0-Mi110 27-MAR-80 15:41 PAGE-11-1
TTEST- . . M
                                           Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
                                                               DEC----
                                                                         R2
                                                                                              ; SUB · FROM · LOOP · COUNT ·
     652
653
                                                              BNE
                                                                         10$
     654
                                                               GLR
                                                                         CKDATA:
                                                                                              :SET-TEST-PATTERN-TO-ZERO
:RESET-START-ADDRESS-
:START-AT-FIRST-ADDR-+ 1
     655
                                                               MOV
                                                                         2(SP),PREADD
     656
                                                               IHC
                                                                         PREADD.
                                                                                              :READ AND COMPARE
:BUMP ADDR (SKIP)
     657
                                                     :25:
                                                               TSR
                                                                         PC.READT
     658
                                                               INC
                                                                         PREADD.
                                                               CMP
                                                                         4(SP), PREADD
                                                                                              ;FINISHED
                                                               BHIS
                                                                                              :NO
     661 002764 000207
                                                               RTS
                                                                         PC:
     662
     664
                                                               TEST-07
     665
                                                               WRITE/READ-ALL-ADDRESSES-WITH-ADDRESS-COMPLEMENT.
     666
     667
          002766
002766
     668
                     012767
                               000000
     669
                                          176376
                                                               MOV
                                                                         #0.TD$SW
                                                                                              RESET TERM DETECTOR
          002774
                     016602
                                                                         2(SP) R2
                                                               MOV
                                                                                              :SET-R2-=-ADDRESS
:SET-UP-START-ADDRESS
     671
672
          003000
                     816667
                                000002.
                                          000000G
                                                               MOV
                                                                         2(SP),PREADD
                                                                                              #SET OF START HUDBESS 

***GET ADDRESS COMPLEMENT 

#SET TEST PATTERN = ADDR COM 

#WRITE CKDATA* TO BYTE TRANS 

#SET R2 = NEXT ADDRESS
          003006
                     005102
                                                    1$:
                                                               COM
                                                                         R2.
R2.CKDATA
     673
          003010
                                000000G
                     010267
                                                               MOV
     674
          003014
                     004767
                                000224
                                                               JSR
                                                                         PC, WRITET
     675
          003020
                     016702
                                                               MOV-
                               000000G
                                                                         PREADD, R2
          003024
                     026667
     676
                               000004 000000G
                                                                         4(SP),PREADD
                                                                                              :FINISHED
     677
          003032
                     103365
                                                               BHIS
                                                                         1$
                                                                                              :NO, CONTINUE
     678
     679
          003034
                     016602
                               000002
                                                                                              :SET-R2-=-ADDRESS
:RESET-START-ADDRESS-
:GET-ADDRESS-COMPLEMENT-
                                                               MOV
                                                                         2(SP),R2
          003040
                     016667
                               000002
                                         000000G
                                                                         2(SP),PREADD
                                                               MOV
     681
          003046
                     005102
                                                               COM
     682 - 003050
                                0000000
                     010267
                                                               Mov
                                                                         R2.CKDATA
                                                                                              :SET.TEST.PATTERN.=.ADDR.COM
          003054
                     004767
                               000224
                                                               ISR
                                                                                              #READ AND COMPARE

#SET R2 = NEXT ADDRESS

#FINISHED
                                                                         PC.READT.
                     016702
     684 003060
                                000000G
                                                                         PREADD, R2
                                                               MOV
     685
          003064
                     026667
                               000004 000000G
                                                               CMP
                                                                         4(SP), PREADD
     686
          003072
                     103365
                                                               BHIS
                                                                         2$
     687
           003074
                     000207
                                                                         ĒС
                                                               RTS
     689
     690
                                                               TEST: 12
     691
                                                               ADDRESSING TEST
     692
     693
     694
          003076
           003076
                     012767
                                000000
                                          176376
                                                               MOV
                                                                         #0.TD$SW
                                                                                              :RESET - TERM - DETECTOR -
                                                                         2(SP) PREADD
CK2 CKDATA
           003104
                     016667
                                000002 000000G
                                                               MOV
                                                                                              GET START ADDRESS
                                                                                              GET READ PATTERN
          003112
003120
                                000000G-000000G-1$:
     697
                     016767
                                                               MOV-
     698
                     004767
                                000160
                                                               JSR.
                                                                         PC.READT.
                                                                                              :READ · AND · COMPARE
     699
          003124
                     162767
                                000001
                                          000000G
                                                               SUB
                                                                         #1.PREADD
                                                                                              ; \mathsf{WRITE} \cdot \mathsf{AT} \cdot \mathsf{SAME} \cdot \mathsf{ADDRESS}
      700
          003132
                     016767
                                000000G · 000000G
                                                               MOV
                                                                         CK3,CKDATA
                                                                                              :GET-WRITE PATTERN
     701
          003140
003144
                     004767
026667
                                000100
                                                               JSR
     702
                                         -000000G
                               คคคคค4
                                                               CMP
                                                                         4(SP),PREADD.
     703 003152
                     103357
                                                               BHIS
                                                                         1$
     704
          003154
                     000207
                                                               RTS
                                                                         РĊ
     705
                                                     T12TU::
                                           176376 M0V #0. TD≴SW :RESET TERM DETECTOR .
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          003156
                     012767
                               000000
                                          176376
```

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TTEST: MACRO M1110 27-MAR-80 15:41 PAGE 11-2: Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     708 003164
                               000004
                                        000000G
                                                             MOV.
                                                                        4(SP),PREADD
                    016667
                                                                                            :START-ADDRESS-=-UPPER-LIMIT
     709 003172
                    016767
                               000000G-000000G-1$:
                                                             MOV:
                                                                        CK2,CKDATA
                                                                                            :READ PATTERN
                    004767
                                                                                            :READ AND COMPARE
:BACK UP TO SAME ADDRESS
     710 003200
                                                                       PC, READT.
                               000100
                                                              JSR
     711
          003204
                     162767
                               000001
                                         000000G
                                                              SUB
                                                                        #1.PREADD
     712.003212
713 003220
                    016767
                               000000G-000000G
                                                             MOV
                                                                        CK3,CKDATA
                                                                                            : WRITE . PATTERN
                    004767
                               000020
                                                              JSR
                                                                        PC, WRITET
     714 003224
                    162767
                              000002
000002
                                         ававава
                                                              SHR
                                                                        #2,PREADD
                                                                                            ;BACK-UP 1
     714 003224
715 003232
716 003240
717 003242
718
719
                                                                        2(SP),PREADD
                    026667
                                        000000G
                                                              CMP
                    003754
                    000207
                                                              RTS
                                                                        PC.
     720
721
722
723
                                                             WRITE-BYTE-TRANSLATOR-
     724
725
          003244
                                                   WRITET:
          003244
                    012767
                               дадаза
                                         176362
                                                             MOV
                                                                        #T$BTAR,TD$TAW
                                                                                            :SELECT-BYTE-TRANS REG-
          003252
                    016767
                               000000G-176364
     726
                                                             MOV.
                                                                       PREADD, TD$TDW.
#T$BT, TD$TAW.
                                                                                            #MOVE ADDR TO TRANSFER REG

*SELECT BYTE TRANS MEMORY

*WRITE BYTE TRANS
     727 003260
728-003266
                    012767
                               000020
                                        176362
                                                              MOV
                    016767
                               000000G-176364
                                                              MOV.
                                                                        CKDATA, TD$TD₩
          003274
                    062767
                               000001 000000G
                                                              ADD:
                                                                        #1,PREADD.
                                                                                            ; BUMP - ADDRESS -
                                                              RTS.
      730 003302.
                    000207
     731
732
      733
                                                             READ BYTE TRANSLATOR
     734
735
     736
          003304
                                                   READT:
          003304
                    012767
                               000030 - 176362
                                                             MOV
                                                                        #T$BTAR,TD$TAW
                                                                                            :SELECT-BYTE-TRANS REG
          003312
                    016767
                               000000G-176364
                                                             MOV
                                                                        PREADD, TD$TDW
#T$BT, TD$TAR
TD$TDR,R1
                                                                                            :MOVE · ADDR · TO · TRANSFER · REG
:SELECT · BYTE · TRANS MEMORY ·
      739
          003320
                    012767
                               000020. 176372
                                                             MOV.
     749
          003326
                    016701
                               176374
                                                             MOV-
                                                                                            :READ BYTE TRANS
     741
          003332
                    026701
                               000000G
                                                              CMP
                                                                        CKDATA,R1
                                                                                            :CHECK - AGAINST - PATTERN
     742.003336
                    001402
                                                                       .+6
PC,PRPERT
                                                                                            ;OK, CONTINUE.
;PRINT.ERROR.MESSAGE
;BUMP.ADDRESS.
                                                             BEO
     743
          003340
                    004767
                               000010
                                                              JSR
     744
          003344
                    062767
                               000001
                                        -000000G
                                                             ADD
                                                                        #1.PREADD
     745
          003352
                    000207
     746
      747
     748
                                                             PREPARE · ERROR · LIST ·
     749
     750
     751
          003354
                                                   PRPERT:
     752
          003354
                                                             SAVE
                                                                        R1.R2.R3
                    010146
                                                                       R1.-(SP)
R2.-(SP)
R3.-(SP)
           003354
                                                             MOV-
          003356
                    010246
                                                             MOV:
           003360
                    010346
     753
754
          003362
                    016767
012767
                              000000G 000000G
                                                             MOV
                                                                        PREADD, ERRADD
     755
          003370
                                                             MOV
                                                                                            ;PRINT.ONE.WORD
:SET.UP.READ.ADDRESS
                                                                        #1.ERRCT
     756
757
          003376
                    012767
                               000030
                                         176362
                                                             MOV.
                                                                        #T$BTAR, TD$TAW
                    016767
012767
          003404
                               000000G:176364
                                                             MOV-
                                                                        PREADD. TD$TDW
                                                                                            :ADDRESS TO READ
     758 '003412-
                              000020
                                                                       #T$BT,TD$TAR
TD$TDR,ERW1
                                                                                            :SELECTION BUFFER
                                         176372
                                                             MOV
     759 003420
760
                               176374
                                         000000G
                                                             MOV.
     761
                                          Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
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The state of the s

R0 M1110 27-MAR-80 15:41 PAGE 11=3 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 ; ... -14, without life 763 003426 012702 000005 :NUMBER.OF.RETRIES :SET.UP.READ ADDRESS: :ADDRESS TO.READ: :SELECT.BYTE.TRANSLATOR: MOV-#5,R2 764 003432 765 003440 766 003446 012767 000030. 176362 15: MOV. #T\$BTAR,TD\$TAW 016767 000000G-176364 PREADD, TD\$TDW 012767 000020 : :176372 MOV #T\$BT,TD\$TAR 767 003454 016703 176374 767 003454 768 003460 769 003462 770 003464 771 003466 772 003470 773 774 003472 775 003500 776 TD\$TDR,R3 :READ OUTPUT BUFFER 020301 CMP -R3,R1 001003 BHE 2\$ R2 :NOT-THE SAME-ERROR-005302 001361 1\$ BR 3\$: REPORT - ERROR 012767 000000G 2\$: MOV #-1,ERRCT : INDICATE UNPREDICTABLE RÉSULTS 004767 000000G PC, MEMERR 3\$: JSR 003504 003504 RESTOR R1,R2,R3 (SP)+,R3 (SP)+,R2 012603 MOV 003506 003510 012602 MOV. 012601 000207 MOÝ. (SP)+,R1 PC 778 779 003512 RTS. 780 000001 .END

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TTEST MACRO M1110 27-MAR-80 15:41 PAGE 11-4
SYMBOL TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
 BITVAL= 000000
                                                 DG.SDF≒-002000
DG.TDF=-004000
                                                                                                  READX.
                                                                                                                                         005 TD$RST= 176366
005 TD$SW = 176376
                                                                                                                  000636R
                                                                                                                                                                                                  T$SEG2= : NAMANA1
 BIT0 = 000001
BIT1 = 000002
                                                                                                  READ1
                                                                                                                  000646R
                                                                                                                                                                                                  T$SEG3= 000002
                                                  ERRADD= · *****
                                                                                                 RR1
                                                                                                                  000742R
                                                                                                                                                 TD$TAR= 176372
                                                                                                                                          005
 BITIO
            = 002000
                                                                                                                                                                                                  T$SO = .000001
                                                 SR ARE
                                                                                                                                                                                                  T$UBUS= 100000
                                                                                                                 000114
                                                                                                                                          002.TD$TAW=.176362
 BIT11 = 004000
                                                                                                 SR.ARS
                                                                                                                  900106
                                                                                                                                          002 · TD$TDR= · 176374
                                                                                                                                                                                                  T$1CLK= 000400
 BIT12 - - A 1 A A A A
                                                 ERW2
                                                             = · ****** GX ·
                                                                                                                  000010
                                                                                                                                          002 · TD$TDW= · 176364
 BIT13 = 020000
                                                                                                                                                                                                  T$8BEN= 000020
                                                 ERW3
                                                             = - жжжжжж G⊠ -
                                                                                                  SR.DLT
                                                                                                                                         002 · T$AD = 000020
002 · T$BA = 000002
                                                                                                                 888814
 BIT14
            = 040000
                                                                                                                                                                                                  T1F
                                                                                                                                                                                                                  000072RG
                                                                                                                                                                                                                                          005
                                                 FD:FID
                                                                 равава
                                                                                          003 SR.ECB
                                                                                                                 000047
                                                                                                                                                                                                  Til.
                                                                                                                                                                                                                  001140RG
001754RG
 BIT15 = 100000
                                                 FD.FHB
                                                                                                                                                                                                                                          005
                                                                 000006
                                                                                          003 SR.ECH
                                                                                                                                          002
                                                                                                                                                 T$BD∙
                                                                                                                                                            = 0000010
 BIT2 - 000004
                                                                                          003 SR.ECL
003 SR.FIB
                                                 FD.FVR
                                                                  000004
                                                                                                                                                                                                                                          005
                                                                                                                 999959
                                                                                                                                          002 T$BSO - 100000
            = 0000010
                                                                                                                                                                                                  TIT
                                                                                                                                                                                                                  002664RG
                                                 FD:LEN
                                                                 000010
                                                                                                                                          002 T$BT - 000020
                                                                                                                 000012
                                                                                                                                                                                                  T12FD
 BIT4
             = 000020
                                                 FN.ACK
                                                                                                                                                                                                                  000340RG
                                                                                                                                                                                                                                          995
                                                                                         004 SR.GRE
004 SR.GRS
004 SR.LEN
                                                                 000016
                                                                                                                 000100
                                                                                                                                          002 · T$BTAR = · 000030
                                                                                                                                                                                                                  000426RG
             = 000040
                                                                                                                                                                                                  T12FU
                                                                                                                                                                                                                                          005
 BITS
                                                 FN.FSA
                                                                                                                 000072
                                                                                                                                          002
                                                                                                                                                · T$BTD · = · 002000
                                                                                                                                                                                                  T12ID
T12IU
                                                                                                                                                                                                                  001366RG
                000100
                                                                                                                                                                                                                                          005
                                                 EN.ESB
                                                                 000002
                                                                                                                 000122
                                                                                                                                         002 · T$CD = · 000100
002 · T$CLK · = · 002000
                                                                                                                                                                                                                  001452RG
 BIT7
             = 000200
                                                                                                                                                                                                                                          005
                                                 FN.FSC
                                                                                         004 SR.LIN
004 SR.LIP
004 SR.MON
                                                                                                                 000066
                                                                 000004
                                                                                                                                                                                                  T120D
                                                                                                                                                                                                                  002172RG
             = . 000400
                                                                                                                                                                                                                                          005
 BITA
                                                 FM.FSD
                                                                 000020
                                                                                                                 000062
                                                                                                                                          002 · T$DISK = · 000200
                                                                                                                                                                                                                  002252RG
             = 001000
                                                                                                                                                                                                  T120U
 BIT9
                                                 FH: MHR
                                                                 000010
                                                                                                                 000006
                                                                                                                                         002 · T$DRD · = · 000004
002 · T$EMEM= · 010000
                                                                                                                                                                                                  TI2TD
            = 0000000
                                                                                                                                                                                                                 003076RG
                                                                                                                                                                                                                                          005
 BYTE0
                                                 FN. NMB
                                                                 000022
                                                                                          004 SR.NDC
                                                                                                                 000042
                                                                                                                                                                                                  T12TU:
 BYTE1 = 000001
                                                                                                                                                                                                                 403156R6
                                                                                                                                                                                                                                          йй5
                                                 FN:QLS
                                                                 000006
                                                                                         004 SR.NDS
                                                                                                                 000036
                                                                                                                                         002 · T$FSAA = · 000000
                                                                                                                                                                                                 T6F 000210RG
T6F 001242RG
T6O 002060RG
 BYTE2 - = - 000002 -
                                                                                                                                                                                                                                          005
                                                 FN.RDC
                                                                 000014
                                                                                         004 SR.NIN
                                                                                                                 000030
                                                                                                                                         002 · T$FSAB = · 000004
 BYTE3 = 0000002
                                                 FH.UPD
                                                                 000012
                                                                                         004 SR.HIP
                                                                                                                 000022
                                                                                                                                         002 T$FSAC= 000014
 SYTE4 = 000004
                                                                                                                                                                                                                                          005
                                                 MEMERR = · ***** GX
                                                                                                 SR.SDB
                                                                                                                 ййййй 32
                                                                                                                                         002 · T$FSB2= · 000010
                                                                                                                                                                                                  T6T
  3YTE5 = 000005
                                                                                                                                                                                                                  002764RG
                                                                                                                                                                                                                                          005
                                                MS.DGN=-010000
N· =-000012-
                                                                                                 SR.SRC
                                                                                                                 000002
                                                                                                                                         002·T$IB· = 000026
 BYTE6 = 000006
BYTE7 = 000007
                                                                                                                                                                                                  T7F
                                                                                                                                                                                                                  000212RG
                                                                                                                                                                                                                                          005
                                                                                                                                         002 T$IBAR = . 000024
                                                                                                 SR.SUN
                                                                                                                                                                                                                  001244RG
                                                 N.BFAC = 000004
                                                                                                                                                                                                                                          005
                                                                                                 SR.TWS
                                                                                                                 000056
                                                                                                                                                 T$IBE -- 020000
 BYTE8 - - 000010
                                                                                                                                                                                                  T70,
                                                                                                                                                                                                                  002062RG
                                                 N.BHGH= 000006
                                                                                                 SR.WSL
                                                                                                                 000052
                                                                                                                                         002 · T$IBF · = · 040000
 BYTE9 = 000011
                                                                                                                                                                                                                  002766RG
                                                                                                                                                                                                                                          005
                                                N.BTCH= 000004
                                                                                                                                         002 T$ICD = 000040
                                                                                                 SR.YR
                                                                                                                 000004
                                                                                                                                                                                                 WÖRD0 =
                                                                                                                                                                                                                 000000
 BYTVAL = 000012
                                                N.BUFB= 004000
                                                                                                 SR.1IN
                                                                                                                                         002 · T$MODE = · 004000
                                                                                                                 000024
                                                                                                                                                                                                 WORD1 =
                                                                                                                                                                                                                 000002
 CALLER: 001044R
                                        005 N.BUFW= 002000
                                                                                                                                         002. T$FTODE= 004000
002. T$OB = 000036
005 T$OBE = 004000
005 T$OBF = 010000
005 T$OBRA = 000034
                                                                                                 SR.1IP
                                                                                                                 000016
 CF:COT= 000041
                                                                                                                                                                                                 UORD2 · =
                                                                                                                                                                                                                 . 999994
                                                N.FOS = 000764
N.QURY= 000031
                                                                                                 STUFF.
                                                                                                                 000000RG
                                                                                                                                                                                                 WORD3 =
                                                                                                                                                                                                                 - 000006
 CF.DGN= 000046
                                                                                                 STUFI
                                                                                                                 001052RG
                                                                                                                                                                                                 WORD4
                                                                                                                                                                                                                 000010
 CF.DHR= 000042
CF.DMC= 000047
                                                 H.SUNT= 0000002
                                                                                                 STUFO.
                                                                                                                 001700RG
                                                                                                                                                                                                 WORD5 = 000012
WORD6 = 000014
WORD7 = 000016
                                                 PREADD= · ****** GX ·
                                                                                                 STUFT.
                                                                                                                 002610RG
                                                                                                                                                 T$0BWA=-000032
                                                                                                                                         005
 CF.HBR= 000045
                                                 PRPERO
                                                                002450R
                                                                                         005
                                                                                                 TD$CTR=:176370
                                                                                                                                                 T$0UTA= · 100000
 CF:HRL= 000044
                                                 PRPFRR
                                                                                                 TD$CTW=-176360
                                                                000664R
                                                                                         005
                                                                                                                                                 T$RBD0=.000200
                                                                                                                                                                                                  WORD8
                                                                                                                                                                                                                 000020
 CF.UPD= 000043
                                                                003354R
                                                 PRPERT
                                                                                                                                                 T$RNB - - 000040
T$RSET - 040000
                                                                                         005
                                                                                                 TD$INL = 004000
TD$MEM = 000270
                                                                                                                                                                                                 WORD9 = 000022 -
 CKDATA= ****** GX
                                                 PRPER 1
                                                                 001602R
                                                                                         005
                                                                                                                                                                                                 WRDVAL = 000024
CK2 = ******* GX-
CK3 = ******* GX-
                                                READ.
                                                                0005400
                                                                                         005
                                                                                                 TD$0AR= 176344
                                                                                                                                                 T$SC· = 0000022
T$SCLK = 020000
T$SEG1 = 000000
                                                                                                                                                                                                 WRITE
                                                                                                                                                                                                                 000514R
                                                                                                                                                                                                                                          005
                                                READI
                                                                991544R
                                                                                         005
                                                                                                 TD$OTR=:176346
DBSLEN= 000116
DG:ERR= 001000
                                                                                                                                                                                                 WRITEO.
                                                                                                                                                                                                                 002340R
                                                                                                                                                                                                                                          005
                                                 READO
                                                                 002400R
                                                                                         005
                                                                                                 TD$QRD= 000274
                                                                                                                                                                                                 WRITET 003244R
                                                                                                                                                                                                                                          005
                                                READT.
                                                                003304R
   ABS:
                 000000
                                       000
                ававава
                                      001
SRCOFF
                                      002
                000122
FDSCOF
                000010
                                       003
                                                                                                                                                                                                  THE PROPERTY COMES TO 
FNOFFS.
                000022
003514
                                      994
 TTEST.
                                      005
ERRORS DETECTED:
                                    ø
VIRTUAL MEMORY-USED: 2241 WORDS- (-9 PAGES)
DYNAMIC-MEMORY: 2804 WORDS- (-10 PAGES)
ELAPSED-TIME: 00:00:29
TTEST-TTEST-FF=[20.1]P.C.TTEST-
```

TO THE MAN TO SERVE A

ere e grap ja

化氯化二甲基甲基

TASK UIC : 0736
TASK UIC : 07.5]
STACK LIMITS: 040212 041211 001000 00512.
PRG XFR ADDRESS: 045042 PRG-XFR: HDDRESS: 045042-TOTAL-ADDRESS-WINDOWS: 2. TASK-IMAGE-SIZE-: 6240, WORDS-TASK-ADDRESS-LIMITS: 040000 070253. R-W DISK-BLK-LIMITS: 000002-000032-000031 00025. *** ROOT-SEGMENT: TMT-R/W-MEM- LIMITS: 040000 070253:030254 12460. DISK-BLK-LIMITS: 000002-000032:000031 00025. MEMORY-ALLOCATION-SYNOPSIS:

MEMORY- ALLOCATION: MAP: TKB: PAGE: 1 27-MAR-80 **Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3**

SECTION		TITLE - IDENT	FILE
. BLK::(RW.I.LCL.REL.CON)			
FDSCOF: (RW.I.LCL.ABS.CON)	041212-011506 04934. 000000 000000 00000.		TMT.OBJ;1
	000000 000000 00000, 000000 000000 00000,		TMT.OBJ;1
FNOFFS:(RW.I.LCL.ABS.CON)	000000 000000 00000		TTEST.OBJ:1
	000000 000000 00000. 000000 000000 00000.		TMT.OBJ:1 TTEST.OBJ:1
SRCOFF:(RW,I,LCL,ABS,CON)	000000 000000 00000	,	
	000000 000000 00000. 000000 000000 00000.	TTEST	TMT.OBJ:1 TTEST.OBJ:1
TTEST::(RW,I,LCL,REL,CON)	057774 003514 01868. 057774 003514 01868.		TTEST.OBJ:1
\$\$F\$R1:(RW.D.GBL.REL.OVR)	063510 001020 00528.		
\$\$F\$R2:(RW.D.GBL.REL.CON)			TMT.OBJ;1
\$\$RESL:(RW,I,LCL,REL,CON) \$\$RESM:(RW,I,LCL,REL,CON)	064634 003420 01808. 132000 007656 04014.	•	

GLOBAL SYMBOLS:

TMT.FSK:3

NAME: TASK: NAME: : ...TMT: PARTITION: NAME: GEN

TASK -

CKDATA · 042506-R · **ERWi** 042522-R. STUFF. 057774-R. Til. 061362-R: T12TU 061134-R T12ID T7F -T7I -T70 -063152+R 060206-R 042510-R · ERW2 042512-R · ERW3 042524-R· STUF I 061046-R 061046-R T10 . 061674-R T1T 061750-R · 062660-R · Tiziu 061446-R T6F 060204-R 061240-R · 062056-R · CK3 042512-R. ERW3 042526-R. STUFÜ 061674-R. TIT-ERRADD 042516-R. MEMERR.047752-R. STUFT 062604-R. T12FD. ERRCT 042520-k. PREADD 042514-R. T1F. 060066-R. T12FU. T120D T120U 062166-R T6 I 061236-R 060334-R 062246-R -T60 062054-R T7T. 062762+R 060066-R: T12FU: 060422-R T12TD 063072-R-MT6T 53072-R-MT6T 062760-R

TMT. TSK: 3 MEMORY-ALLOCATION MAP. TKB. 27-MAR-80 **Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3**

*** TASK-BUILDER-STATISTICS:

TOTAL-WORK-FILE-REFERENCES: 11893.
WORK- FILE- READS: 0.
WORK- FILE-WRITES: 0.
SIZE-OF-CORE-POOL: 6634. WORDS-(25. PAGES)
SIZE-OF-WORK-FILE: 2048. WORDS-(8. PAGES)

ELAPSED TIME:00:00:15

173

234567

8

41 42

43 44 45

46 47

56 57

.FITLE - FMAIN. .LIST MEB

> TERM DETECTOR 'MANUAL' DEBUGGING AIDS MAIN-MODULE.

THIS MODULE PASSES CONTROL TO ITS SUB-MODULES (COMMAND-MODULES) BASED ON INFORMATION IN THE COMMAND LINE (TERMINAL INPUT). THE SUB-MODULES CONTINUE TO PARSE THE COMMAND LINE TRANSFERRING CONTROL TO THEIR SUB-ROUTINES. THE SUB-ROUTINES DO THE ACTUAL INTERFACING WITH THE HARDWARE. THUS, THERE ARE THREE LEVELS OF CONTROL. FOR EXAMPLE, TAKE THE COMMAND: THE LOT OF THE HARDWARE THE SECOND IS PARSED BY THE MODULE TMAIN, THE TOB'R REPRESENTS THE SECOND IS PARSED BY THE MODULE TMAIN, THE THAIN SUB-MODULE TMEM, THE THIRD LEVEL OF CONTROL AND IS PARSED BY THE TMAIN SUB-MODULE TMEM, THE THIRD LEVEL OF CONTROL A SUB-ROUTINE OF TLOAD ACTUALLY CONTROLS THE LOADING OF THE HARDWARE. TMAIN CONTAINS THE COMMANDS RES' (RESET) AND 'EX' (EXIT).

SUB-MODULES OF TMAIN: TREG REGISTER COMMANDS TMEM-MEMORY COMMANDS INPUT BUFFER AND BYTE TRANSLATOR COMMANDS TDATA TRUN -RUN TD COMMANDS

CONTROL IS RETURNED TO TMAIN WHEN A COMMAND HAS BEEN EXECUTED OR ANNO ERROR ENCOUNTERED.

TMAIN-ALSO-CONTAINS-DATA-AND-SUBROUTINES-COMMON-TO-ALL-OF-ITS SUB-MODULES.

ASSEMBLY: MCR>MAC TMAIN, LP = IMO4, TMAIN. FROM-[5.3]

TASK BUILD: 1. TD-STAND-ALONE-PACK COMMAND FILE AIDTD.CMD AIDTD/DA.AIDTD=TMAIN.TREG.TDATA.TRUN

PAR=PAR14K ASG=TT0:1:2

AIDTD, AIDTD=AIDTD/MP. PAR=GEN:40000:40000

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TMAIN MACRO M1110 27-MAR-80 13:39 PAGE 5-1

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RESLIB=[1,1]FCSRES_RO
ASG=TT0:1:2
ASG=TT0

```
RO-M1110 27-MAR-80 13:39 PAGE-6
TMA IN.
                                                        Approved For Release 2005/07/12—CIA-RDP85-00514R000200020001-3
        66
67
        68
69
70
71
                                                                                  LOCAL DATA AREAS
                                                                                  .MCALL: QIOW$5,QIO$5,EXIT$5,ABRT$5,GCML$,GCMLB$,FSR5Z$,CLEF$5.MCALL: ASTX$5,FDBDF$,FDRC$A,FDOP$A,NMBLK$,OPEN$R,GET$,CLOSE$
        72
73
74
75
76
77
78
79
                                                                                   .GLOBL - IO.WVB, IO.RVB, IO.ATA, IO.DET -
                                                                    ÉFN.1
LUN.TT
                           000001
                                                                                                                           :EVENT-FLAG-FOR-TERMINAL-QIO'S
                           000001
                                                                                                                           :TERMINAL LUN
                                                                                                                           GCML.LUN
;LUN-FOR DISK-*DATA* FILE
;LUN-FOR DISK-BYTE TRANSLATOR-OVERRIDE FILE-
                            000002
                                                                     CMILUN-
         80
                            000003
                                                                     TXTLUM:
        81
82
                            000004
                                                                     TRLUN:
                                                                                                                           #LOOP-ON TEST-FLAG

#PRINT-ONE-WORD-ONLY-

#010-+AST-ISSUED-

#BYTE-TRANSLATOR-OVERRIDE-IN EFFECT

#REPEAT-PROMPT-
         83
                                                                     LOOP .
                            000004
         84
                            000010
                                                                     ONCE -
                                                                                                10
        85
                            000020
                                                                     ASTFLG.
                                                                                                20
        86
                            000100
                                                                     RIDE
                                                                                                100
         87
                                                                     RP.
                            000200
                                                                                                200
                                                                                                                           PRINT OUTPUT BUFFER CONTENTS

;DO NOT PRINT OB CONTENTS

;CONTROL PRINTING OF MEMORY CONTENTS
         88
                            000400
                                                                     QP -
                                                                                                400
        89
90
                            001000
                                                                     QΝ٠
                                                                                                1000
                                                                     OUT.
                            002000
                                                                                                2000
         91
         92
        93
94
                                                                                   .NLIST
                                                                                                BEX-
              000000
                           003654
                                                                     MYSELF: .RAD50
STAT:: .BLKW-
                                         076640 -
                                                                                                ZAIDTDZ⊹
2.
         95
              000004
                                                                                   .BLKW
        96
97
              000010
                                                                     ERWORD: .WORD
                                                                                                                           ; INDEX: VALUE: FOR: ERROR: MESSAGE: TABLE: ; TARGET: FOR: NUMERIC: CONVERSIONS: FROM: ASCII:
                                                                                                                          TARGET FOR NUMERIC CONVERSIONS FROM ASCII

ALL PURPOSE FLAG

PRELIM BIT SETTINGS FOR TD CONTROL REG (TD$CTW)

COMMAND LINE BUFFER

COMMAND LINE POINTER

RECEIVER FOR AST CHAR

RETN ADDR SAVE AREA

START ADDR FOR MEMORY LOADING PRINTING

WORKING ADDR FOR MEMORY LOADING PRINTING

MEMORY INCREMENT VALUE

(COMMAND LINE) RESPONSE COUNT

MEMORY UPPER LIMIT

COUNTER FOR 8 TO 6-BIT CONVERSION

LENGTH OF DATA' BUFFER

WORK COUNTER FOR 7 DATA' RTN

COFFSET INTO 7 DATA' BUFFER

LENGTH OF CHANGE DATA + CHANGE START ADDRESS
             000012
000014
                            000000
                                                                     BINWD:: .WORD
                                                                     BASE:: .WORD
APLACE:: .WORD
GCMBUF:: .BLKW
         98
                            ававава
                                                                                                Ø
                                                                                                0
              000016
                            000000
        100
              000020
                                                                     GCMLEN:: .WORD
                            000000
        101
              000142
        102.000144
                            000000
        103
              000146
                            000000
                                                                     ASTWRD: .WORD
                                                                     RTHPT:: .WORD.
MSTRT:: .WORD.
        104 000150
                            000000
        105
              000152
                            000000
       106
107
              000154
                            000000
                                                                     MSTR2:: .WORD
                                                                     MEND: .WORD
INCVAL: .WORD
RSPCNT: .WORD
              000156
                            000000
                            000000
              000160
        109
              000162
                            000000
                                                                     UPLIM:: .WORD.
                            000000
        110 000164
       111
             000166
        112-000170
                            000000
                                                                     DATALN:: .WORD
DPLUS:: .WORD
OFF6:: .WORD
        113 000172
                            000000
        114 000174
                            000000
                                                                                                                           :LENGTH OF CHANGE DATA + CHANGE START ADDRESS
        115
              000176
                                                                     CHLEN:: .WORD
                            000000
        116
                                                                                                                           GONVERTED NUMERIC VALUES FROM COMM LINE)
        117
              000200
                                                                     WWORDS::
                                                                     DATA1:: .WORD.
DATA2:: .WORD.
       118 000200
119 000202
                           000000
                            000000
                                                                                                й
        120 000204
                           000000
                                                                     DATA3:: .WORD.
        121
                                                                                  MEMORY LIMITS
       122
                                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
```

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TMA IN -
         MACRO :11110 27-MAR-80 13:39 PAGE:6-1
                                       Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     123
    124 000206
125 000210
                                               AHIGH:: .WORD
                   007777
                                                                                     :FSA-A-
                   000000
                                               ALOW::
                                                         .WORD
                                                                  7777
     126
         000212
                   007777
                                               BHIGH::
                                                         .WORD
                                                                                     ;FSA·B
     127 000214
128 000216
                   000000
                                               BLOW:
                                                         .WORD
                                                                  Й
                   007777
                                               CHIGH::
                                                         .WORD
                                                                   7777
                                                                                     :FSA · C
     129
         000220
                                               CLOW::
                   000000
                                                         .WORD
     130
         000222
                                                IHIGH::
                                                         .WORD
                                                                                     : INPUT-BUFFER
     131
         000224
                   160000
                                                ILOW::
                                                          . WORD
                                                                   160000
                                                                  3776
     132
         .000226
                   003776
                                               OHIGH::
                                                         .WORD
                                                                                     :OUTPUT BUFFER
     133 000230
                   000000
                                               OLOW::
                                                         .WORD
                                                                  Ø
     134 000232
                                                THIGH::
                                                         .WORD
                                                                   255.
                                                                                     :BYTE · TRANSLATOR
     135
         000234
                   000000
                                               TLOW::
                                                         .WORD
                                                                  0
     136
     137
     138
                                                         ROUTINE · CONTROL · TABLES
     139
                                                         COMMAND MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES
     140
     141
     142
         000236
                                               CTBL::
                                                         .ASCII
                                                                  /ST/
     143
         000236
                       123
                                124
                                                                                     :STORE · INTO · A · REGISTER
         000240
                   000000G.
     144
     145
                       122
                                                         .ASCII
         000242
                                105
                                                                   /RE/
                                                                                     :READ · A · REGISTER
     146
         000244
                   000000G
                                                         .WORD
                                                                  RE1
         000246
000250
                                104
     147
                      114
                                                          .ASCII:
                                                                   ZLD2
                                                                                      :LOAD · A · MEMORY ·
                   000000G
                                                                  1 D 1
     148
                                                         . MORD
         000252
                                                                                      :PRINT MEMORY CONTENTS TO CONSOLE
                       120
                                122.
                                                         .ASCII
                                                                   PR/
     150
         000254
                   000000G
                                                          .WORD
                                                                  PR1
     151
         000256
                      104
                                101
                                                          .ASCII
                                                                   ZDAZ
                                                                                      :SIMULATE DATA BASE
     152
         000260
                   000000G
                                                         . MORD
                                                                  DA1
         000262
                       103
                                110
                                                         .ASCII
                                                                   ZCHZ
                                                                                     :CHANGE SIMULATED DATA
     154
         000264
                   000000G
                                                          .WORD
                                                                   CH1
     155
         000266
000270
                       114
                                111
                                                          .ASCII
                                                                   /LI/
                                                                                      :LIST-SIMULATED-DATA
     156
                   000000G
                                                          .WORD
                                                                   LI1
         000272
                       105
                                                          .ASCII
                                116
                                                                   ZENZ
                                                                                      CONTROL LENGTH OF SIMULATED DATA
     158
         000274
                   000000G
                                                          .WORD
                                                                                      :READ SIMULATED DATA OR BYTE TRANSLATOR;
:DATA IN FROM DISK
:TRANSFER (BYTE TRANS OR INPUT BUFFER)
                                                         .ASCII
     159
         000276
                       104
                                106
                                                                   ZDF.
         000300
                   000000G
     160
                                                                   DF 1
     161
         000302
                       124
                                122
                                                          .ASCII
                                                                   ZTR/
         000304
                   000000G
                                                          .WORD
                                                                                      FROM PROGRAM MEMORY TO TD
     163
         000306
                       122
                                123
                                                          .ASCII
                                                                   ZRSZ
                                                                                      : RESET - TERM - DETECTOR -
                   0106061
     164
         000310
                                                          .WORD
                                                                   RS1
         000312
                                                          .ASCII.
                                125
                                                                   ZRUZ
     165
                                                                                      : RUN - TERM - DETECTOR
                       122
                   000000G
                                                         .WORD
                                                                   RU1
     166
         000314
         000316
                       105
                                130
                                                          .ASCII
                                                                   /EX/
                                                                                      ;EXIT TD EXERCISER 🚟
                   A106201
     168
         000320
                                                          .WORD
                                                                   EX1
                                                CNUM-
     169
                   000015
                                                                   <.-CTBL>/4
```

```
TMA IN
               RO-M1110 27-MAR-80 13:39 PAGE-7
                                            Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
     171
172
173
                                                                 'DATA'
                                                                          TABLES
                                                                 DTBL .
                                                                                       6-BIT TABLE
     175
176
                                                                 DSAVE
                                                                                       ASCII MIRROR OF 8-BIT INPUT
     177
     178
          000322
                                                      DTBL::
DSAVE::
                                                                 .BLKW
                                                                            <<1364.*3>/8.>+1
          002322
005046
     179
180
                                                                .BLKB
                                                                           1364.
     i8i
          005046
                         000
                                                                 .BYTE
                                                                           ø
                                                                 .EVEN
     183
     184
                                                                 CONVERSION TABLE FOR TDATA:
     185
     186
          005050
                                                      TR6TBL::
          005050
005055
                         377
377
075
     187
                                               377
                                                                 .BYTE
                                                                           -1, -1, -1, -1, -1
                                                                                                            :CODES:0 - 11 UNUSED
     188
                                               377
                                                                           -1,-1,-1,-1
                                                                 .BYTE
     189
          005062
                                                                                                            :LINE FEED
:CODES:13 -14 UNUSED
     190
          005063
                                    377
                                                                 .BYTE
                                                                            -1.-1
     191
                         074
377
          005065
                                                                           74
                                                                                                            :CARRAIGE RETURN
     192
          005066
                                    377
                                               377
                                                                            -1,-1,-1,-1,-1,-1
                                                                                                            :CODES:16 -37 UNUSED
     193
                                    377
                                               377
377
                                                                 .BYTE
                                                                           -1,-1,-1,-1,-1,-1
          005102
005110
     194
                          377
                                                                           -1,-1,-1,-1,-1,-1
     195
                         040
                                                                 .BYTE
                                                                           40
                                                                                                            041
                                                                 .BYTE
     197
          005112
                         042
                                                                 .BYTE
                                                                           42
     198
          005113
                         043
                                                                 .BYTE
                                                                           43
                                                                                                            POUND SIGN.
DOLLAR PERCENT
          005114
                         044
                                                                 .BYTE
     200
          005115
                         045
                                                                 .BYTE
                                                                           45
     201
          005116
                         046
                                                                           46
47
                                                                                                            : AMPERSAND
     202.005117
                         047
                                                                 BYTE
                                                                                                            ; APOSTROPHE :
; LEFT : PAREN :
; RIGHT : PAREN :
     203
          005120
                         050
                                                                           50
     204
          005121
                         051
                                                                           51
52
53
54
                                                                 .BYTE
     205 005122
                         052
                                                                 .BYTE
                                                                                                            :ASTERISK
          005123
     206
                         053
                                                                 .BYTE
                                                                                                            :PLUS
          005124
     207
                         054
                                                                 .BYTE
                                                                                                            :COMMA
          005125
                         055
                                                                                                            : HYPHEN-
     209
          005126
                         056
                                                                           56
57
                                                                 .BYTE
                                                                                                            : PERIOD -
     210 005127
211 005130
                         057
                                                                 BYTE
                                                                                                            :SLASH.:
          005130
                         060
                                                                           60
                                                                                                            :0
     212
213
214
                         061
                                                                 .BYTE
                                                                                                            : 1
          005132
                         062
                                                                 .BYTE
                                                                           62
63
                                                                                                            ;2
;3
          005133
005134
                         063
                                                                 .BYTE
     215
                         864
                                                                                                            ;4
;5
     216
217
218
          005135
                         065
                                                                 BYTE
                                                                           65
          005136
                         066
                                                                 BYTE
                                                                           66
67
          005137
                         067
070
                                                                 .BYTE
          005140
                                                                                                           :8
:9
     220
          005141
                                                                 .BYTE
                         072
073
377
377
     221 005142
222 005143
                                                                 BYTE
                                                                                                           COLON:
SEMI-COLON:
SEMI-COLON:
SEMI-COLON:
SEGUAL SIGN NOT USED
RIGHT ANGLE BRACKET NOT USED:
OUESTION MODE
                                                                           73
     223
          005144
                                                                 BYTE
    224 005145
225 005146
                                                                 . BYTE
                         377
                                                                 BYTE
     226
         005147
                         077
                                            BYTE 77 : QUESTION: MARK ... BYTE 0 : USE: AT SIGN: FOR DOCUMENT START Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     227 005150
```

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TMA IN
                                                                                       01
      228-005151
229 005152
230 005153
                                                                            .BYTE
                                                                                                                             žΑ
                             001
                                                                                                                             ;B
;C
                                                                           .BYTE
                                                                                        02
                              002
                                                                                       03
04
                              003
                                                                            .BYTE
                                                                                                                             ;D.
                                                                           .B'TE
      231
            005154
                              004
                                                                                        05
      232-005155
233 005156
                              995
                                                                                        06
                              006
            005157
                              007
                                                                            .BYTE
                                                                                        07
      235
236
            005160
005161
                              010
011
                                                                                        10
11
                                                                            .BYTE
                                                                                                                             ; H
                                                                            BYTE
                                                                                                                             : I
                                                                                        12
13
14
15
      237
            005162
                              012
      238
239
240
            005163
                              013
                                                                            .BYTE
            005164
005165
                              014
015
                                                                                                                             ۽L
                                                                            BYTE
                                                                                                                             έÑ.
                                                                                        16
17
20
      241
            005166
                              016
                                                                            .BYTE
                                                                            .BYTE
                                                                                                                             ;0
;P
      242-005167
                              017
      243
            005170
                              020
       244
            005171
                              021
                                                                            .BYTE
                                                                                        21
                                                                                                                             ;0
            005172
005173
005174
       245
                              022
                                                                            .BYTE
                                                                                        22
23
24
25
26
27
30
31
       246
247
                              023
024
                                                                            .BYTE
                                                                                                                             ;5
;T
                                                                            BYTE
       248
            005175
                              025
                                                                            .BYTE
            005176
005177
                              026
027
                                                                            .BYTE
.BYTE
.BYTE
       249
       250
251
                                                                                                                              : 1.1
             005200
                              030
                                                                                                                              ;×
       252
253
                                                                                                                             LEFT-SQ-BRACKET- ZONE-
BACK-SLASH- SUBZONE-
RGT-SQ-BRACK
             005201
                              031
                                                                            .BYTE
                                                                                        32
33
             005202
                              032
033
       254
             005203
             005204
                              034
                                                                            BYTE
                                                                                        34
       256
            005205
                              035
                                                                            .BYTE
                                                                                        35
                                                                                                                              :RGT-SQ-BRACKET-- PARA
            005206
005207
                                                                                        36
37
                                                                                                                             ;UP-ARROW- SENT:
;UNDERBAR: CLOSE:UP
;CODES:140 - 177 NOT USED
       257
                              036
037
                                                                            .BYTE
       257
258
259
260
261
262
263
                                                                            .NLIST.
                                                                                        MEB
                                                                            REPT
BYTE
ENDR
                          000040
                                                                                        40
                                                                                        -1
       264
265
                                                                            .LIST
                                                                                        MEB
                                                                            .EVEN
```

APP 37

Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 TMAIN. 267 268 269 270 271 DEFAULT BYTE TRANSLATOR TABLE BTRANS:: 005250 . WORD 002077 : DOCUMENT - START 002077 273 005250 274 005252 000001 .WORD 002 003 :B 005254 000002 .WORD 276 277 005256 000003 . MORD 4 5 005260 0000004 .WORD 004 278 279 280 000005 005262 .WORD 005 .WORD 006 005264 ававая 005266 000007 .WORD 007 .WORD .WORD 10 281 005270 000010 010 : H 282 - 885272 011 999911 12 13 283 005274 000012 .WORD 284 005276 285 005300 .WORD 013 014 000013 000014 15 16 17 286 005302 .WORD 015 : M. 287 005304 288 005306 000016 JUNE D 016 : N .WORD 000033 034 021 022 289 005310 .WORD 20 21 22 23 24 ; Q 290 005312 291 005314 000021 000022 . MORD .WORD 005316 000023 .WORD 023 .WORD 293 005320 000024 024 25 26 27 025 294 005322 999925 005324 000026 .WORD 026 295 ;₩ ;X ;Y 296 005326 005330 000027 .WORD 027 030 297 298 000030 31 32 33 005332 000031 .WORD 299 005334 000032 .WORD 032 ;Z. ;ZONE MARK 949933 300 005336 040033 .WORD 100034 :SUBZONE · MARK 301 005340 100034 :PARAGRAPH MARK :SENTENCE 35 36 302 - 005342 010035 .WORD 010035 004036 437 303 005344 004036 .WORD :CLOSE UP 37 .WORD 304 005346 305 005350 000437 SPACE: EXCL POINT: QUOTE: 40 .WORD BIT8 000400 BIT8 BIT8 306 005352 000400 .WORD 42 43 .WORD 307 005354 308 005356 000400 000301 .WORD : POUND 309 005360 .WORD 302 : DOLLAR : PERCENT 4<u>4</u> 45 . 310 005362 000400 JUNED BITS .WORD :AMPERSAND 311 005364 000400 :APOSTROPHE: 312 005366 000400 .WORD BITS 47 313 005370 314 005372 315 005374 000400 000400 .WORD BITS :RIGHT PAREN .WORD 51 52 55 55 56 ; ASTERISK . 000400 .WORD BITE 000400 000400 .WORD BIT8 316 005376 . WORD : COMMA 317 318 005400 005402 JUORD BITS : HYPHEN: :PERIOD BITS 319 005404 999499 .WORD 320 005406 000400 .WORD :SLASH-57 BIT8 257 277 ;0 ;1 60 321 005410 000257 .WORD 61 .WORD 322.005412 000277 .WORD 323 005414 000057

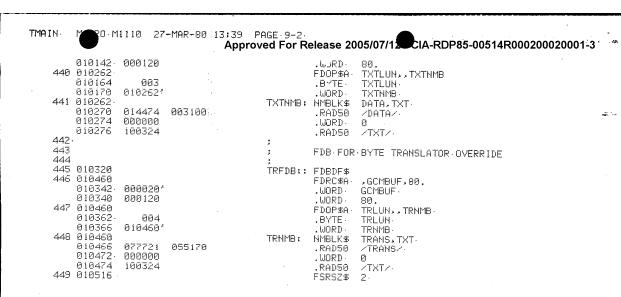
Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

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TMA IN
            MACRO-F11110 27+MAR-80 13:39 PAGE-8-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      324 005416
325 005426
326 005422
                          000077
                                                                               .WORD
                                                                                                                                    ;3
;4
;5
                                                                                                                                                              63
64
65
66
67
                         000117
                                                                                            117
137
157
177
                                                                                .WORD
                                                                                .WORD
            005424
                          000157
                                                                                                                                    ;6
;7
                                                                               .WORD
      328 005426
329 005430
                         000177
000217
                                                                               .WORD
                                                                                            217
237
BIT8
BIT8
BIT8
     329 005436
330 005432
331 005434
332 005448
333 005444
335 005444
336 005444
337 005450
338
339
340
341
342 005452
343 005452
                                                                               .WORD
                                                                                                                                    :8
                                                                                                                                                              70
71
72
73
74
75
76
77
                          000237
                                                                                .WORD
                                                                                                                                    ;9
                          000400
                                                                               .WORD
                                                                                                                                    :COLON-
                          000400
                                                                                                                                    :SEMI-COLON-
                          000400
                                                                                .WORD
                          000400
                                                                               .WORD
                                                                                            BIT8
                                                                                            303
BIT8
                          000400
                                                                               .WORD
                                                                                                                                    :DECIMAL
                               000
                                                                  BTEND:: .BYTE
                                                                                            Ø
                                                                                .EVEN.
                                                                               BYTE - TRANSLATOR - OVERRIDE - TABLE -
                                                                  ;
                                                                 BTOVER:
      343
            005452
                                                                               .BLKW-
                                                                                            <BTEND-BTRANS>/2
```

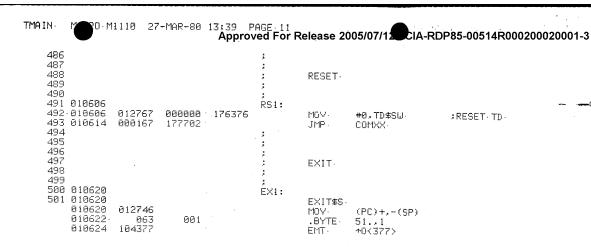
```
The second second
TMA IN
              0 Mł110 27-MAR-80 13:39 PAGE 9
                                        Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
    345
346
    347
                                                           PRINT-LINE-
    348
    349
         005652
                       015
                                 012
                                                                                                   PRECEDE PRINT LINE WITH CRLF
                                                                     15,12
    350
         005654
                                                 PRINT::
    351
352
                                                           .N_IST
                                                                     MEB
                   000116
                                                           .REPT.
                                                                     78.
    353
354
                                                                     40
                                                           .ENDR
    355
356
                                                           .LIST-
                                                                    MER
     358
                                                           TABLE · OF · MESSAGES ·
     359
     360
     361
         005772
                       иии
                                                           .BYTE -
                                                                     0
         005773
                       015
                                 012
                                           015
                                                           .BYTE
                                                                     15, 12, 15, 12
         005777
                       124
                                 105.
                                           123
                                                           .ASCIZ
                                                                     /TEST(S) ENDED/
     364
         006015
                                 012
                                                           .BYTE
                                                                     15, 12
    365
         006017
                       105
                                 116
                                                           .ASCIZ
                                                                     /END OF FILE REACHED/-
15,12
     366
         006043
                       015
                                 012
                                                           BYTE
         006045
                       105
                                 116
                                           104
                                                                     ZEND OF MEMORY REACHED/
                                                           .ASCIZ-
    368
         006073
                       015
                                 012
                                                           .BYTE.
     369
         006075
                       105
                                 116
                                                                     ZENTER-ANY-CHARACTER-TO-EXIT-LOOPZ-
15,12,15,12,15,12
ZTERM-DETECTOR MANUAL-DEBUGGING-AIDSZ-
     370
         006136
                       015
                                 012
                                          015
122
    371
372
         006144
                       124
                                 105
                                                           .ASCII
         006207
                       015
015
                                 012
                                           000
                                                                     15,12,0
15,12
         006212
                                 012
    374 006214
                                 114
                                                           .ASCIZ
.BYTE
.ASCIZ
                                           114
                                                                     /ILLEGAL.ODD.ADDRESS/
    375
         006240
                       015
                                 012
                                                                    15,12
/FOR BT, 'CHANGE' COMMAND MUST PRECEED 'LIST'
    376
         006242
                       106
015
                                 117
012
                                           122
         006317
                                                           .BYTE
                                                                     15,12
         006321
    378
                       111
                                 114
                                           114
                                                           .ASCIZ
.BYTE
                                                                     /ILLEGAL·CHARACTER·IN·*DATA*//
    379
         006355
                       015
    380
         006357
                       123
                                 124
012
                                           101
                                                           .ASCIZ
                                                                     /START ADDRESS OUT OF RANGE HIGH/
                       015
    38 i
         006417
                                                           .BYTE
                                                                     15.12
                       123
015
    382
         006421
006460
                                 124
                                           101
                                                           .ASCIZ
.BYTE.
                                                                     /START-ADDRESS OUT-OF-RANGE-LOW/-
15.12-
    383
                                 012
116
    384
                                          126
                                                                     ZINVALID TABLE NAMEZ
                                                           .ASCIZ
    385
         006505
                       015
                                                                     15,12
BYTE · TRANSLATOR · TABLE · OVERFLOW/
                                                           BYTE
    386
         006507
                       102
015
                                131
012
                                          124
                                                           .ASCIZ
    387
                                                           .BYTE
    388
         006550
                       105
                                 115
                                                           .ASCIZ
.BYTE
.ASCIZ
                                          120
                                                                     ZEMPTY-INPUT-LINE-IN-BYTE-TRANSLATOR-FILE/
    389
         006621
                       015
                                 012
                                                                    15,12

/ERROR ON READ OF BYTE TRANSLATOR FILE/
    390
         006623
006671
                       105
                                 122
    391
                                 012
                                122
012
    392
         006673
                       105
                                          122.
                                                                     ZERROR-ON-OPEN OF-BYTE-TRANSLATOR-FILE/
                                                           .ASCIZ
    393
         006741
                       015
                                                           .BYTE
                                                                     15, 12
         006743
                                122:
012:
122:
012
    394
                      105
015
                                          122
                                                           .ASCIZ
                                                                     ZERROR ON READ OF 'DATA' FILEZ
         007000
    396
397
         007002
007037
                       105
                                          122
                                                           .ASCIZ
                                                                     /ERROR.ON.OPEN OF. DATA! FILE/.
                      015
                                                           .BYTE
                                                                     15.12
    398
         007041
                      111
                                116
012
                                          126
                                                                     /INVALID.FILE.MNEMONIC/.
    399 007067
                      015
                                                           .BYTE
.ASCIZ
                                                                     15,12
    400 007071
401 007133
                      047
                                                                    / DATA: COMMAND MUST PRECEED END://
                      015
                                012
                                                                     15, 12
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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MACRO M1110 27-MAR-80 13:39 PAGE 9-1
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TMA IN-
    402 - 007135
                       047
                                114:
012:
                                          111
                                                           .ASCIZ
                                                                    /'LIST' START-ADDRESS-OUT-OF-RANGE/
    403
         007177
                       015
                                                          .BYTE
                                                                    15,12
    494
         007201
                       047
                                 104
                                          101
                                                          .ASCIZ
                                                                    /'DATA' COMMAND-MUST-PRECEED-'LIST'/
         007244
                       015
    405
                                012
                                                          .BYTE
                                                                    15,12
         007246
                       947
    406
                                104
                                          101
                                                          .ASCIZ
.BYTE:
                                                                    / DATA: COMMAND MUST PRECEED CHANGE:/
    407
         007313
                       015
                                012
                                                                    15.12
                       111
015
                                                                    ZINVALID-MEMORY-MNEMONIC/
    468
         007315
                                116
                                          126
                                                          .ASCIZ
    409
         007345
                                012
                                                           .BYTE
    410
                       111
                                 116
                                          126
                                                          .ASCIZ
                                                                    /INVALID.REGISTER.MNEMONIC/
    411
         007401
                       015
                                                          BYTE
                                                                    15,12
    412 007403
413 007431
                       111
                                 116
                                          126
                                                          .ASCIZ
                                                                    /INVALID-NUMERIC-VALUE/
                       015
                                012
                                                           .BYTE
    414
         007433
                       115
                                          123
                                111
                                                          .A3CIZ
.BYTE
                                                                    /MISSING.OPERAND/
         007453
007455
    415
                       015
                                012.
                                                                    15,12
    416
                       111
                                 116
                                          126
                                                          .ASCIZ
                                                                    ZINVALID-COMMANDZ-
     417
         007475
                       015
                                012
                                                           .BYTE
     418
         007477
                       111
                                 116
                                          126
                                                          .ASCIZ
.BYTE
                                                                    /INVALID·LOOP·CONTROL/
         007524
     419
                       015
                                012
                                                                    15.12 \cdot
         007526
     428
                       105
015
                                116
012
                                                                                                                                373.
                                          124
                                                          .ASCIZ
                                                                    /ENTER CORRECT RESPONSE/
     42 i
         007555
                                                          .BYTE
                                                                    15,12
                                                                                                                              3 23
         007557
007575
     422
                       105
                                116
                                          124
                                                          .ASCIZ
                                                                   /ENTER COMMAND/
                                                                                                                    2
     423
                       015
                                012
                                                          .BYTE
     424
         007577
                       123
377
                                          114
                                105
                                                          .ASCIZ
                                                                    /SELECT-BASE/
     425
         007613
                                                ASCIZ:
                                                          .BYTE
                                                                    377
    426
427
                                                          .LIST
                                                                    BEX
     428
                                                          .NLIST
                                                                   CND
     429
    430
431
                                                          COMMAND LINE MACRO
    432
    433
         007614
007614
007656
    434
                                                GCMBLK: GCMLB$
                                                                   2, GCMBUF, CMILUN
2.
                       992
                                                          BYTE
                       002
                                                          .BYTE
                                                                    CMILUN-
          007662
                   0100023
                                                          .WORD
                                                                   65$
         007670
                       001
                                                          .BYTE
         007670
007633
007754
007755
007766
007770
                       MARC
                                                                    FD.TTY!FD.REC!FD.CCL.
                       000
                                                          .BYTE
                       047
                                                          .BYTE
                                                                    GE.COMIGE.INDIGE.CLOIGE.SIZ
                       377
                                002
                                                          BYTE
                                                                    -1.2
                   0100423
                                                          .WORD
                                                                    64$
                   явяяря:
                                                          .WORD
                                                                   GCMBUF
         007774
007776
                                012
                       015
                                                          .ASCII:
                                                                   <15><12>
✓· >✓·
                       040
                                040
                                          949
         010001
                       076
         010010
                   012321
                                                          .RAD50
                                                                    ZCMIZ
                   000000
                                                          .WORD
                                                                   0
         010014
                   000000
                                                          .WORD
                                                                 ., п
         010016
010040
                   012314
                                                          .RAD50
                                                                   ZCMD/
                   000120
                                                          .WORD
                                                                   80.
    435
    436
437
                                                          FDB.FOR.DISK 'DATA' FILE
    438
         010122
                                                                                                                           MENT TO PARTY
                                                TXTFDB:: FDBDF$
    439
         010262
                                                          FDRC⊈A∙
                                                                   .GCMBUF.80.
                                                                                                                              11
         010144
                  0000201
                                        Approved For Release 2005/07/12
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TMAIN MACRO M:110 27-MAR-80 13:39 PAGE 10 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     451
     452
453
                                                              ENTER - HERE -
     454
     455
     456 010516
457 010516
                                                    START:
                    004767
                               003052
                                                              JSR-
                                                                        PC,OUT1
                                                                                             ; ISSUE INFORMATION MESSAGE
     458
     459
     460
     461
                                                              TOP - OF - COMMAND - LOOP -
     462
     463
     464 010522
                                                    COMXX::
     465 010522
                     004767
                               003212
                                                                                             :PROMPT FOR COMMAND:
:FIND THE COMMAND:
:OK, CONTINUE
                                                              JSR
                                                                        PC.SELTST
     466 010526
                     004767
                               002346
                                                              JSR
                                                                        PC.FIND.
1$
     467 010532
468 010534
                     103003
                                                              BCC
                     004767
                               003164
                                                              JSR
                                                                        PC, ERR2
                                                                                             : 'INVALID COMMAND:
     469
          010540
                     000770
                                                              BR
                                                                        COMXX.
     470 010542
471 010546
                     022700
                               000002:
                                                                        #2,R0
2$
PC,ERR2
                                                    1$:
                                                              CMP
                                                                                             :COMMANDS - ARE - 2 - CHARS
                    001403
004767
                                                              BEQ
     472
          010550
                               003150
                                                                                             ; 'INVALID COMMAND';
; TRY AGAIN
     473
          010554
                    000762
                                                              BR
                                                                        COMXX:
     474
     475
          010556
                     012700
                               000015
                                                    2$:
                                                              MOV
                                                                        #CHUM, RØ
                                                                                             #RØ = NUMBER OF COMMANDS 
#R2 -> TABLE OF VALID COMMANDS 
#FIND MATCH IN TABLE
          010562
                    012702
                               0002361
                                                                        #CTBL,R2
PC,SCAN
                                                              MOV:
     477 01056€
                     004767
                                                              JSR
     478 010572
                     103003
                                                              BCC
                                                                        3$
                                                                                             :OK, CONTINUE:
:COMMAND NOT:IN:TABLE
     479 010574
                    004767
                               003124
                                                              JSR
                                                                        PC, ERR2
     480 010600
                    000750
                                                              BR
                                                                        COMXX-
                                                                                             :TRY-AGAIN-
                                                                                                                            100
     481
                                                                                                                              100
     482
                                                              JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
     483
                                                                                                                               4
     484 010602 000171
                               000000
                                                    3$:
                                                                        @(R1)
```



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TMAIN: MACRO: M1110 27-MAR-80 13:39 PAGE: 12:
                                               Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     503
     504
                                                                     SET-UP-BEFORE-PROMPTING-ON-ANY-"LD" COMMAND-OR_BEFORE-
     505
                                                                     EXECUTING ANY 'PR' COMMAND FOR FSA A, B, C. THE FIELDS SET UP HERE ARE USED IN THE TMAIN PROMPTING SUBROUTINE PDATA (LDCNTL FOR FSA'S) AND THE PRINT ROUTINE PROATA (PRONTL FOR FSA'S).
     506
     507
     508
     509
     510
                                                                     INPUT:
     512
                                                                                LOAD/PRINT-START-ADDRESS
LOWER-MEMORY-LIMIT-
UPPER-MEMORY-LIMIT-
                                                                     2(SP)
     513
514
                                                                     4(SP)
                                                                     6 (SP)
                                                                     APLACE - FSA SELECTION
     516
517
                                                                     OUTPUT:
                                                                     OUTPUT:
INCVAL - VALUE BY WHICH MEMORY ADDRESS INCREMENTS
MEND - ADDRESS OF LAST WORD IN MEMORY TO BE LOADED PRINTED
RSPCNT - NUMBER OF WORDS TO EXPECT IN COMMAND LINE WEMORY WIDTH):
     520
521
                                                                                            NO-ERROR (START ADDRESS IS IN RANGE)
                                                                     G-BIT-CLEAR
     523
                                                                     C-BIT-SET-
                                                                                            ERROR · IN · RANGE
     524
     525
      526
                                                                     MEMORY.
                                                                                            INCVAL
                                                                                                                   RSPCNT.
                                                                     FSA · A ·
                                                                                                                   333
     528
529
      530
     531
     532.010626
                                                         BUFFSA::
     533 010626
534 010634
                      012767
                                  000000
                                            176376
                                                                     MOV
                                                                                 #0.TD$SW
                                                                                                       :RESET.TD.
:START.CLOCK
                      052767
                                  020000
                                             -167154
                                                                     BIS
                                                                                 #T$SCLK,APLACE
      535
          010642 016767
                                  167150 1176360
                                                                     MOV
                                                                                APLACE, TD$CTW
                                                                                                       :SET.TD.CONTROL.REG
     536
                                                                     IF THE FIELD MEND IS NOT = -1. THEN A 'LD GOR' PR' ROUTINE HAS PUT A MEMORY UPPER LIMIT IN
     537
     538
     539
                                                                     THIS FIELD. EG. A COMMAND SUCH AS:
                                                                     >LD AM 0 10
WOULD PUT 10 IN THE FIELD MEND:
     540
     541
542
      543
          010650
                       022767
                                              167300
                                                                     OMP.
                                                                                                        :MEMORY END ADDR SET UP
     544 010656
                       001003
                                                                     BNF
                                                                                 10$
                                                                                                       :YES
:SET END ADDR = MEMORY UPPER LIMIT =
:IS LOAD ADDRESS IN RANGE (LOW)
:OK, CONTINUE
:OUT OF RANGE
     545
          010660
                       016667
                                  000004
                                              167270
                                                                                 4(SP),MEND
                                                                     MOV
     546
          010666
                       026766
                                  167260.
                                              000002.
                                                          10$:
                                                                     CMP.
                                                                                 MSTRT, 2(SP)
     547
           010674
                       103003
                                                                     BHIS
                                                                                 1$
     548
          010676
                       004767
                                  002716
                                                                                 PC.ERR19
                                                                     JSR -
                                                                                                                                A Herion
     549 010702
                       000432
                                                                                 BUFCX.
                                                                                                       :IS ADDR IN RANGE (HIGH)
:YES, CONTINUE
:OUT OF RANGE
     550 010704
                       026766
                                  167246
                                              000004
                                                         15:
                                                                     CMP
                                                                                 MEND,4(SP)
     551 010712
                       101403
                                                                     BLOS
                                                                                 2$
     552.010714
                       004767
                                                                                PC.ERR20
                                  002674
                                                                     JSR -
     553 010720
554 010722
555 010730
                      000423
026767
                                                                                 BUFCX-
                                                                                 MSTRT, MEND
                                  167224 167226
                                                                     CMP
                                                                                                        : IS-START-ADDR-LOWER-THAN-END-ADDR
                                                                                                       :15:51HRT:HDDR
:YES, CONTINUE
:OUT_OF:RAUSE
                      101403
                                                                     BLOS
                                                                                3$
PC,ERR20
     556 010732
557 010736
                                  002656
                      004767
                                                                     JSR.
                      000414
                                                                     ΒŘ
                                                                                 BUFCX.
                                                                                                        :EXIT-
                      012767
     559
          010740
                                  000001 167212
                                                         3$:
                                               67212 3$: MOV #1, INCVAL BUFFERS INC. BY Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
```

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R0 M1110 27-MAR-80 13:39 PAGE 12-1 Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3 TMA IN 560 010746 561 562-010754 563 010760 564 010764 000003: 167206 012767 #3.RSPCNT MOV-; NUMBER · OF · SEGMENTS · (FOR · PROMPT) 011666 062706 000241 000004. 0000043 (SP),4(SP) #4,SP :MOVE-RETURN-ADDRESS-:ADJUST-SP-(FOR-MEM-LIMITS) MOV-ADD CLC 565 010766 565 010770 567 010774 568 011000 569 011002

MO^U

ADD SEC RTS

PC-

BUFCX:

BUFXX:

000405

011666 062706 000261

000207

000004

000004

BUFXX (SP),4(SP) #4,SP :RETURN

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                                                                                Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
         572
573
574
                                                                                                                    SET.UP.BEFORE.PROMPTING.ON.ANY.*LD* COMMAND.OR.BEFORE
                                                                                                                    EXECUTING ANY PR' COMMAND FOR NON-FSA MEMORIES, T
FIELDS SET-UP HERE ARE USED IN THE TMAIN PROMTPING
                                                                                                                    SUBROUTINE PDATA AND THE PRINT ROUTINE PRDATA.
                                                                                                                    INPUT: 2(SP)
                                                                                                                                       LOAD/PRINT.START.ADDRESS
LOWER.MEMORY.LIMIT.
UPPER.MEMORY.LIMIT.
         588
                                                                                                                    4(SP)
         581
                                                                                                                    6 (SP)
                                                                                                                                       - TD CONTROL REGISTER BIT SETTING
         583
584
                                                                                                                    OUTPUT:
                                                                                                                    OON OF THE PROPERTY OF THE PR
          585
          586
          587
          588
          589
                                                                                                                    C-BIT-CLEAR
C-BIT-SET-
                                                                                                                                                           NO-ERROR-(START-ADDRESS-IS IN-RANGE)
ERROR-IN-RANGE-
          598
          591
          593
                                                                                                                    MEMORY.
                                                                                                                                                           INCVAL
          594
                                                                                                                     IΒ
          595
                                                                                                                    ÓB
          596
          598
          599 011004
                                      012767
                                                          000002: 167146
                                                                                                 BUFS2:: MOV-
                                                                                                                                       #2, INCVAL-
SET-
                                                                                                                                                                               :BUFFERS INC-BY-2
          600 011012.
                                      000403
          601
                   011014
                                      012767
                                                          000001: 167136
                                                                                                 BUFSET:: MOV-
                                                                                                                                                                               :BUFFERS INC-BY-1
          602
         603 011022
                                      012767
                                                          000000 -- 176376
                                                                                                 SET:
                                                                                                                    MOV-
                                                                                                                                        #0.TD$SUL
         604 011030
                                      016767
                                                          166762 176360
                                                                                                                    MOV
                                                                                                                                       APLACE, TD$CTW.
                                                                                                                                                                              :SET - TD - CONTROL - REG
         605
          606
                                                                                                                    IF THE FIELD MEND IS NOT = -1. THEN A 'LD' OR 'PR' ROUTINE HAS PUT A MEMORY UPPER LIMIT IN THIS FIELD. EG. A COMMAND SUCH AS: >LD 08 0 10
          607
          698
         609
          610
                                                                                                                    WOULD PUT 10 IN THE FIELD MEND.
          611
         612-011036
                                      022767
                                                                                                                                        #-1.MEND
                                                                                                                                                                              :MEMORY-END-ADDR-SET-UP
          613 011044
                                       001003
                                                                                                                    BNE
                                                                                                                                        10$
                                                                                                                                                                              :YES-
          614 011046
                                                          000004
                                       016667
                                                                              167192
                                                                                                                                                                              :SET-END ADDR = MEMORY-URRER LIMIT-
                                                                                                                    MOV-
                                                                                                                                        4(SP),MEND
          615 011054
                                       026766
                                                          167072
                                                                             000002
                                                                                                 10$:
                                                                                                                    CMP
                                                                                                                                                                              : IS LOAD ADDRESS IN RANGE (LOW)
                                                                                                                                       MSTRT, 2(SP)
         616 011062
                                       103003
                                                                                                                    BHIS
                                                                                                                                        1$
                                                                                                                                                                              OK, CONTINUE:
                                                                                                                                                                                                                                                \tilde{\mathcal{T}}.
         617
                  011064
                                       004767
                                                          002530
                                                                                                                     JSR
                                                                                                                                       PC.ERR19
          618 011070
                                                                                                                                                                                                                " f .
                                       000446
                                                                                                                    BR
                                                                                                                                       BUFCX2
          619 011072
                                       026766
                                                          167060: 000004
                                                                                                                    CMP
                                                                                                                                       MEND,4(SP)
                                                                                                                                                                              :IS-ADDR IN-RANGE-(HIGH)
         620 011100
621 011102
                                       101403
                                                                                                                    BLJS
                                                                                                                                                                              :YES, CONTINUE
:OUT OF RANGE
                                                                                                                                       2$
                                      004767
                                                          002506
                                                                                                                     JSR -
                                                                                                                                       PC.ERR20
         622-011106
                                      000437
                                                                                                                    BR
                                                                                                                                       BUFCX2
         623 011110
                                      026767
                                                          167036
                                                                            167040
                                                                                                                    CMP
                                                                                                                                       MSTRT, MEND
                                                                                                                                                                              : IS - START - ADDR - LOWER - THAN - END - ADDR -
         624 011116
                                       101403
                                                                                                                                                                              YES, CONTINUE
OUT OF RANGE
                                                                                                                    BLOS
                                                                                                                                       3$
         625 011120
                                      004767
                                                         002470
                                                                                                                    JSR.
                                                                                                                                       PC.ERR20
         626 011124
                                      000430
                                                                                                                                       BUFCX2.
                                                                                                                                                                              :EXIT
         627
                                                                                                                                                        CIA-RDP85-00514R000200020001-3
                                                                                Approved For Release 2005/07/12
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TMA IN	M O O	1110 27	-MAR-80∷	:3:39 P Approv	AGE 13-1 red For Re	elease 2	005/07/1 2 IA-I	RDP85-00514R000200020001-3
	011126 011134	032767 001013	000001	167024	3\$:	BII.	#1,INCVAL. 5\$: IS-MEMORY ADDR. INCREMENT EVEN:
630	011136 011144	032767 001004	000001	167006		BIT. BNE.	#1.MSTRT. 4\$;NO, ANY START-ADDR-IS-OK- ;IS-START-ADDRESS-EVEN- ;NO, ERROR-
	·011146 011154	032767 001403	000001i	167002		BIT. BEQ.	#1.MEND 5\$:IS END ADDRESS EVEN
	011156 011162	004767 000411	002416		4\$;	JSR. BR	PC,ERR23 BUFCX2	
637 638 639	011164 011172 011176 011202	012767 011666 062706 000241	000001: 000004: 000004:		5 \$:	MOV: MOV: ADD: CLC:	#1,RSPCNT (SP),4(SP) #4,SP	: NUMBER OF SEGMENTS (FOR PROMPT) : MOVE RETURN ADDRESS : ADJUST SP (FOR MEM LIMITS)
642 643	011204 011206 011212 011216	000405 011666 062706 000261	000004: 000004		BUFCX2:	BR MOW ADD SEC	BUFXX2 (SP),4(SP) #4,SP	RETURN
	011220	000201			BHEXX2:		PC.	

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TMA IN -
         MACRO M1110 27-MAR-80 13:39 PAGE 14
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     647
     648
     649
                                                           LOAD CONTROL FOR FSA'S
     650
     651
                                                                   - VALUE-BY-WHICH-MEMORY-ADDRESS-INCREMENTS
- MEMORY-START ADDRESS-
- MEMORY-END-ADDRESS-
                                                           INCVAL -
     653
     654
                                                           #RP-FLAG - DETERMINES WHETHER TO LOOP ON LOAD
     656
     657
     658
     660 011222
                                                 LDCNTL::
     661 011222
662 011230
                                                           BIT
                    032767
                             000200
                                       166564
                                                                     #RP,BASE
                                                                                         :REPEAT.PROMPT
                                                                                         001424
                                                           BED
                                                                     2$
     663 011232
                                                                     PC, PDATA
                    004767
                              000144
                                                           JSR
     664 011236
                    103460
                                                           BCS
                                                                     CHTLX-
     665 011240
                    182457
                                                           BVS
     666 011242
                              166706
                    016767
                                        176362
                                                           MOV-
                                                                     MSTR2,TD$TAW
                                                                                         :MOVE SEG 1
:MOVE SEG 2
:MOVE SEG 3
:ADVANCE ADDRESS
     667 011250
                    016767
                              166724
                                        176364
                                                                     DATA1.TD$TDW
DATA2.TD$TDW
DATA3.TD$TDW
                                                           MOV
     668 011256
                    016767
                              166720
                                        176364
                                                           MOV
                    016767
066767
     669 011264
670 011272
                              166714
                                        176364
                                                           MOV-
                              166662
                                       166654
                                                           ADD
                                                                     INCVAL,MSTR2
          011300
                    000754
                                                                     1$
                                                                                         : REPEAT
     672
     673 011302
                                                                                         PROMPT ONCE :END OF MEMORY OR FERROR
                    994767
                              000074
                                                           JSR
                                                                     PC.PDATA
          011306
     674
                    103434
                                                           BCS
                                                                     CHTLX-
     675
          011310
                    102433
                                                                                         :<CR> RESPONSE TO PROMPT :
SET UP TRANNSFER ADDRESS
                                                           BVS
                                                                     CHTLX-
                                                                     MSTR2.TD$TAW
DATA1.TD$TDW
     676
          011312
                    016767
                              166636
                                       :176362+
                                                           MOV
                                                                                         :MOVE-SEG-1
:MOVE-SEG-2-
:MOVE-SEG-3
     677
          011320
                    016767
                              166654
                                        176364
                                                           MOV
     678 011326
                    016767
                              166650
                                        176364
                                                           MOV
                                                                     DATA2, TD$TDW
     679
          011334
                    B16767
                              166644
                                       -176364
-166604
                                                           MOV
                                                                     DATA3,TD$TDW
          011342
                    066767
                              166612
                                                                     INCVAL, MSTR2
MSTR2, MEND
                                                                                         #ADVANCE ADDRESS:
#HAS-UPPER-MEMORY-LIMIT-BEEN REACHED
                                                           ADD.
                    026767
     681
          011350
                              166600
                                                           CMP
                                        166600
     682.011356
                    181755
                                                           BLOS
                                                                     3$
                                                                                         :NO, CONTINUE.
     683 011360
                              0000041 166426
                    932767
                                                           BIT.
                                                                     #LOOP, BASE
                                                                                         :LOOP ON ?
     684 011366
                    001404
                                                           BEU
                                                                     CHTLX-
                                                                                         :NO, EXIT
     685
          011370
                    016767
                              166556 : 166556
                                                           MOM
                                                                     MSTRT, MSTR2
                                                                                         :REINITIALIZE - ADDRESS
     686
          011376
                    000745
                                                           BR
                                                                     3$
     687
     688
          011400
                                                 CNTLX:
     689
          011400
                    000207
                                                           RTS.
                                                                     PC.
```

"你说我就我们的我们的

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O M1110 27-MAR-80 13:39 PAGE 15
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TMAIN
     691
    692
     693
                                                           PROMPTING CONTROL FOR LOADING ALL MEMORIES AND BUFFERS
     694
                                                           READ NUMERIC DATA FROM THE COMMAND LINE, CONVERT AND STORE
     695
                                                           INTO A COMMON BUFFER. EG. IF THE INITIATING COMMAND IS:
     696
                                                           DLD - AM - A
     697
                                                            THIS ROUTINE WILL PUT OUT A PROMPT AND EXPECT 3 NUMERIC
                                                           VALUES IN RETURN:
>000000 000000 000000
     699
                                                           THIS ROUTINE CONVERTS THESE ASCII OCTAL VALUES INTO BINARY AND STORES THEM INTO DATA1, DATA2, DATA3
     700
     701
     702
     703
                                                            INPUT: (SET-UP-BY-TMAIN-SUBROUTINE-BUFSET)
                                                                     - CURRENT MEMORY ADDRESS
- MEMORY UPPER ADDRESS LIMIT
     794
                                                           MSTR2.
     705
                                                           MEND:
     706
                                                                       NUMBER · OF · WORDS · TO · EXPECT · IN · COMMAND · LINE
                                                           RSPCNT-
     707
                                                           OUTPUT:
     788
     709
                                                           WWORDS (DATA1, DATA2, DATA3) DEPENDING UPON RSPONT
     710
                                                           C-BIT-CLEAR, V-BIT-CLEAR-
C-BIT-CLEAR, V-BIT-SET
C-BIT-SET, V-BIT-CLEAR
     711
                                                                                                   NORMAL · RETURN
     712
                                                                                                   <CR> RESPONSE TO PROMPT
                                                                                                   END OF MEMORY OR CONVERSION ERROR
     715
                                                           REGISTERS 1, 4, 5 DESTROYED
     716
     718 011402
                                                  PDATA::
     719 011402
                    026767
                              166546 166546
                                                            CMP
                                                                     MSTR2, MEND
                                                                                         ;UPPER · MEMORY · LIMIT · REACHED
     720 011410
                    101403
                                                           BLOS.
                                                                      10$
                                                                                         ;NO, CONTINUE
                                                                                         :END · OF · MEMORY · REACHED ·
     721 011412-
                    BB4767
                              002146
                                                            JSR.
                                                                     PC . ENDMEM
     722-011416
                    000470
                                                                                         :SET CARRY AND EXIT
                                                           BR
                                                                     PDCX.
     723
                                                                     MSTR2,R1
                                                                                         :PREPARE TO PRINT ADDRE
:POINT TO PRINT LINES :
:CONVERT ADDRESS...)
     724 011420
                                                  10$:
                                                            MOV
                    016701
                              166530
                    012705
004767
     725 011424
                              005654
                                                            MOV.
                                                                     #PRINT, R5
     726
          011430
                              001672
                                                            JSR
                                                                     PC. UNPK
     727
          011434
                    004767
                              001732
                                                                                         :PRINT OUT ADDRESS
                                                            JSR.
                                                                     PC.CONSOL
                                                                      #20040.GCMBLK+G:DPRM::ERASE CR+LF
     729 011440
                    012767
                              020040
                                       .176326
                                                            MOM
     730 011446
                              001036
                                                                     PC.GCONLY· ;PROMPT·
#15.GCMBLK+G.DPRM·;RESTORE·CR
                    004767
                                                            JSR.
     731 011452
                    112767
                              000015
                                       176314
                                                            MOVB
                                                                      #12.GCMBLK+G.DPRM+1; RESTORE.LF.
PC.FIND. ;LOCATE.FIRST.DATA_WORD.IN.COMMAND.LINE.
                    112767
     732-011460
                              000012
                                                            MOVB
     733 011466
                    004767
                              001406
                                                            JSR
                                                                     PC.FIND.
     734 911472
                    103437
                                                            BCS
                                                                     PDVX
                                                                                         :<CR> RESPONSE, EXIT.
     735
     736 011474
                    012705
                              000200*
                                                            MOV
                                                                      #WWORDS,R5
                                                                                         :WORDS FROM COMMAND LINE GO INTO THIS TABLE
                                                                                         NUMBER OF WORDS TO EXPECT:
CONVERT WORD TO BINARY
OK CONTINUE
INVALID NUMBERIC VALUE
HOVE WORD TO TABLE
     737 011500
                    016704
                              166456
                                                            MOV
                                                                     RSPCHT,R4
     738 011504
                    994767
                              991596
                                                  2$:
                                                            JSR.
                                                                     PC.PACK.
          011510
     739
                    103003
                                                            BCC
                                                                      3$
     740 011512
                    004767
                              002176
                                                            JSR
                                                                      PC,ERR4
     741 011516
                    000430
                                                            BB
                                                                     PDCY
     742-011520
                    016725
                              166266
                                                                     BINWD, (R5)+
                                                  3$:
                                                            MOV
                    005304
     743 011524
                                                            DEC
                                                                                         ;SUB · FROM · LOOP · COUNT ·
                                                                      R4
                                                                      PDCCX-
                    001427
     744 011526
                                                            BEQ
                                                                                         :FINISHED
     745 011530
                    004767
                              001344
                                                            JSR
                                                                     PC.FIND.
                                                                                         :FIND.NEXT.WORD
     746 011534
                    103003
                                                            BCC
                                                                      4$
                                                                                         ;OK, CONTINUE
          011536
                    004767
                              002156
                                        Approved For Release 2005/07/123: CIA-RDP85-00514R000200020001-3
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TMA IN	MACOO MILIA	27-MAR-80 13:39	DACE 15 1		
II IH TIA	THURU-THIID		FHGE 1371		· ·
		Λ	and the Dala	MARIATIAN - CIA DODOS	
		AD	proved For Rele	ase 2005/07/12 : CIA-RDP85	1-UUS 14KUUUZUUUZUUU 1-3
		7 \P			

748 011542 749	000416		;	BR	PDCX	
750 011544 751 011550 752-011552- 753 011556 754 011562- 755 011564 756 011570	122711 001355 016725 022704 001411 016725 000406	000122 · · · · · · · · · · · · · · · · · ·	4\$:	CMPB · BNE · MOV · CMP · BEQ · MOV · BR	#*R,(R1) 2\$ BINWD,(R5)+ #1.R4 PDCCX. BINWD,(R5)+ PDCCX.	REPEAT PATTERN (FSA(S ONLY): 170 NO : WRITE BAME PATTERN TO NEXT SEG : ALREADY FILLED LAST SEG : YES, EXIT
758 011572 759 011574 760 011576 761 011600 762 011604 763 011604 765 011610 765 011610	000262 000405 000242 000261 000402 000241 000242		PDCX: PDCCX: PDCCX:	CLC+ SEV+ BR CLV+ SEC+ BR CLC+ CLV+ RTS+	PDDX PDDX PC·	;INDICATE ⟨CR⟩ RESEONSE : INDICATE END OF MEMORY REACHED

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R0 M1110 27-MAR-80 13:39 PAGE 16
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TMA IN
     768
     769
770
771
772
                                                                 PRINT CONTROL FOR FSA'S
                                                                 FIELDS · ALREADY · SET · UP · BY · 'BUFFSA':
     773
774
775
                                                                 MSTR2- - MEMORY-ADDRESS-
MEND- - MEMORY-END-ADDRESS-
INCVAL- - VALUE-BY-WHICH-MEMORY-ADDRESS-INCREMENTS
#LOOP-FLAG- - REPEAT-MEMORY-READ
     776
777
778
779
                                                                 OUTPUT:
                                                                 DATA1, DATA2, DATA3 (INPUT.TO.ROUTINE.PRDATA)
     780
     781
     782
783 Ø11614
                                                      PRCNTL::
                                                                                                  ; MOVE · ADDR · TO · TRANSFER · REG
; MOVE · SEG · 1
     784 011614
                                 166334
                                           .176362
                                                                 MOV-
                                                                            MSTR2, TD$TAW
                      016767
                                                      1$:
     785 011622
                      016767
                                 176374
                                            166350
                                                                 MOV.
                                                                            TD$TDR,DATA1
                                                                                                  :MOVE SEG 2
:MOVE SEG 3
     786 011630
                      016767
                                 176374
                                            166344
                                                                 MOV-
                                                                            TD$TDR,DATA2
     787 011636
788 011644
                      016767
                                 176374
                                            166340
                                                                 MOV-
                                                                            TD$TDR,DATA3
                                                                                                  :PRINT : MEMORY : CONTENTS
                      004767
                                 000040
                                                                 JSR
                                                                            PC, PRDATA
     789
     790 011650
                      066767
                                 166304: 166276
                                                                 ADD
                                                                            INCVAL, MSTR2
                                                                                                  ;ADVANCE ADDRESS
     791 011656
792-011664
                      026767
101753
                                                                                                  : HAS · UPPER · MEMORY · LIMIT · BEEN - REACHED
                                 166272
                                            166272
                                                                 CMP
                                                                            MSTR2, MEND
                                                                 BLOS
BIT
                                                                            1$
                                                                                                  :NO. CONTINUE.
     793 011666
794 011674
795 011676
                                                                            #LOOP, BASE
                                                                                                  :LOOP
                      032767
                                 000004
                                            166120
                      001404
                                                                  BEQ
                                                                            PCHTLX-
                                                                                                  :NO. EXIT
                      016767
000743
                                 166250: 166250
                                                                            MSTRT, MSTR2
                                                                                                  ;REINIT START ADDRESS
                                                                  MOV-
      796 011704
                                                                                                  : AND · REPEAT
                                                                 BR
                                                                            1$
     797
798 011706
799 011706
                                                      ;
PCNTLX:
                                                                 RTS
                      000207
                                                                            PC:
```

year or

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14
                                                                                                         ~ h
          MACRO-M1110 27+MAR-80 13:39 PAGE-17
TMA IN
                                               Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     801
     802
     803
                                                                     COMMON-PRINT ROUTINE.
                                                                     THIS ROUTINE CONVERTS VALUES IN THE FIELD WWORDS TO
     804
     805
                                                                     ASCII.OCTAL (DEPENDING ON RSPCNT) AND PRINTS THEM (TT0)
     806
     807
                                                                     INPUT:
                                                                     #OUT FLAG

#ONCE FLAG

RSPCNT
                                                                                              WHEN LOOP OPTION IS IN EFFECT, PRINT 1 WORD ONLY-CONTROL PRINTING OF 1 WORD WHEN #OUT IS SET-NUMBER OF WORDS TO PRINT (SEE 'BUFSET' RTM) MEMORY ADDRESS (SEE 'BUFSET') MEMORY WORDS (DATA1, DATA2, DATA3, DATA4)
     808
     889
     810
     811
                                                                     MSTR2
     812
     813
                                                                     REGISTERS 1, 3, 4, 5 DESTROYED
     814
     815
      816
     817 011710
                                                          PRDATA:
     818 011710
819 011716
                       832767
                                  002000: 166076
                                                                     BIT.
                                                                                 #OUT,BASE
                                                                                                        ;OUTPUT · CONTROL · ON
                       001407
                                                                     BEQ:
                                                                                 105
                                                                                                        ;NO, SKIP-OUTPUT-CONTROL-
;ONE-LINE-PRINTED-
      820 011720
                       032767
                                   000010:/166066
                                                                                 #ONCE, BASE
     821 011726
822-011730
                       001026
                                                                                 PRDX
                                                                                                                EXIT
                                   000010:/166056
                                                                                                        SET FLAG FOR NEXT TIME
                       052767
                                                                     BI3
                                                                                 #ONCE, BASE
      823
     824 011736
825 011742
826 011746
                                                                                                        :FIRST CONVERT ADDRESS TO ASCII.
                       016701
012705
                                   166212
                                                          10$:
                                                                     MOV-
                                                                                 MSTR2,R1
                                                                                 #PRINT, R5
                                  0056541
                                                                     MOV:
                       004767
                                   991354
                                                                     JSR-
                                                                                 PC>UNPK+
                                                                                                        :PERFORM CONVERSION
                                                                                                        :POINT TO WORDS FOR PRINTING
:NUMBER OF MEM WORDS TO PRINT:
:ADVANCE PRINT LINE POINTER:
:LOAD ONE WORD:
:CONVERT IT TO ASCII:
:DEC WORD COUNT:
:REPEAT:
      828 011752
829 011756
                       012704
016703
                                   000200
                                                                     MOV:
                                                                                 #WWORDS,R4
                                   166299
                                                                     MOV-
                                                                                 RSPCNT,R3
#2,R5
      830 011762
                       062705
                                   000002
                                                          15:
                                                                     ADD.
           011766
                       012401
                                                                     MOV
                                                                                 (R4)+,R1
      832 - 011770
                       004767
                                   001332
                                                                      JSR
                                                                                 PC. UNPK
      833 011774
                       005303
                                                                     DEC
BNS
                                                                                 R3
      834 011776
                       001371
                                                                                 1$
      835 012000
                       004767
                                   001366
                                                                      JSR
                                                                                 PC, CONSOL
                                                                                                        : PRINT - LINE -
      836
837
           012004
                       000207
                                                          PRDX:
                                                                      RTS
                                                                                 PC-
```

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TMAIN.
                 0-M1110 27-MAR-80 13:39 PAGE 18
                                               Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     839
     840
     841
                                                                     CALCULATE 8-BIT BYTE OFFSET INTO 6 BIT BYTE TABLE.
     842
     843
                                                                      INPUT:
                                                                                    *CHANGE OR 'END! VALUE FROM COMMAND LINE
     844
                                                                     BIHWD
     845
                                                                                      (= OFFSET · INTO · 6-BIT · BYTE · TABLE)
     846
     847
                                                                      OUTPUT:
     848
                                                                                     8-BIT-BYTE-OFFSET-INTO-6-BIT-BYTE-TABLE-
FOUR-6-BIT-BYTES-FIT-IN-THREE-8-BITX
BYTES: "COUNT" REPRESENTS THE POSITION
                                                                      OFF6
     849
                                                                      COUNT:
     850
     851
                                                                                     OF A 6-BIT BYTE WITHIN THE THREE 8-BIT BYTES, POSITIONS ARE 0, 1, 2, 3.
     852
      853
                                                                      TO GET-THE OFFSET VALUE, MULTIPLY THE BINUD (6-BIT-LOCATION) VALUE BY 3, THEN DIVIDE BY 4. TO GET-THE POSITION, SUBTRACT THE REMAINDER FROM THE DIVISION.
     854
     855
      856
      857
                                                                      FROM: 4.
      858
      859
           012006
                                                          OFFSET::
      861 012006
                       005767
                                   166000
                                                                                 BINWD
                                                                      TST.
                                                                                                         ;CHECK·FOR·VALUE·≕™0
                                                                                 1$
0FF6
                                                                                                        ;NO, CONTINUE
      862 - 912912
                       001005
                                                                      BHE
      863 012014
                       005067
                                   166154
                                                                      CLR
      864 012020
                       005067
                                   166142
                                                                      CLR
                                                                                 COUNT
                                                                                                         START AT FIRST BIT POSITION
      865 012024
                       000422
                                                                      BR
                                                                                 2$
      866
           012026
                       016701
                                   165760
                                                          1$:
                                                                      MOV
                                                                                 BINWD,R1
                                                                                                         :PREPARE FOR MULT
      868 012032
869 012036
                       012700
004767
                                   000003
                                                                      MOV
                                                                                 #3.,R0
PC,$MUL
                                                                                                        :MULTIPLIER:
:MULT VALUE:BY:6
                                   000000G
                                                                      JSR
      870
           012042
                       010100
                                                                      MOV
                                                                                 R1.R0
                                                                                                         :MOVE PRODUCT TO RO FOR DIVIDE
                                                                                                        #MOVE PRODUCT TO RM FOR DIVIDE

#DIVISOR IN R1

#GET NUMBBER OF 8-BIT BYTES

#FACE OFFSET INTO TABLE

#PREPARE TO CALCULATE POSITION

#SUB REMAINDER FROM ABOVE DIVISION

#SAVE POSITION
                                                                                 #4.,R1
PC,$DIV
      871 012044
                       012701
                                   000004
                                                                     MOV
      872 - 012050
                       004767
                                   000000G
                                                                      JSR
      873
           012054
                       010067
                                   166114
                                                                      MOV
                                                                                 R0.OFF6
           012060
                       012702
                                                                                 #4. R2
R1.R2
                                   000004
                                                                     MOV-
      875 012064
                       160102
                                                                      SUB
      876
877
           012066
                       010267
                                   166074
                                                                      MOV
                                                                                 R2,COUNT
                                                                                                                                       \mathbb{H}_{p}
           012072
                       000207
                                                          2$:
                                                                      RTS
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TMA IN
           MACRO M1110 27-MAR-80 13:39 PAGE 19
                                                  Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
      879
      888
                                                                         BUILD-6-BIT-BYTE-'DATA' BUFFER-
PROCESS-ONE-COMMAND-LINE'S-WORTH OF-8-BIT-BYTES.
CONVERT-THEM TO-6-BIT-BYTES-AND-ADD-THEM-TO-THE-
6-BIT-BYTE-TABLE, ALSO SAVE-THE-8-BIT-BYTES-IN-
THEIR-CURRENT-FORM-FOR USE-BY-'LI' COMMAND.
      881
      882
      883
      884
      885
      886
      887
                                                                          INPUT:
      888
                                                                          GCMLEN -
                                                                                        LENGTH-OF-COMMAND-LINE
                                                                                      - LENGTH-OF-CUMMHAD-LINE
- 6-BIT-BYTE-POSITION-(SEE-ROUTINE 'OFFSET')
- POINTER-TO-COMMAND-LINE
- POINTER-TO-6-BIT-BYTE-TABLE
- POINTER-TO-8-BIT-ASCII MIRROR-IMAGE-OF-COMMAND-
      889
                                                                          COUNT:
      890
                                                                          R1
                                                                          R4
      892
      893
                                                                                         LINE INPUT TABLE
      894
      895
                                                                          OUTPUT:
      896
                                                                                     - NUMBER OF 6-BIT CHARACTERS ADDED #0.6-BIT
      897
                                                                                         BYTE TABLE IN CURRENT CALL OF DBLD.
      898
      999
      900 012074
                                                              DBLD::
                                                                         MOV GCMLEN.DPLUS :NUMBER OF CHARS IN COMMAND LINE
THE STRINGS <12> AND <15> ARE ALLOWED IN THE COMMAND LINE
FOR THE ENTERING OF CARRAIGE RETURNS AND LINE FEEDS. A
CARRIAGE RETURN IS SAVED IN THE PIRROR TABLE AS A BINARY
15. A LINE FEED AS A BINARY 12. THE BRACKETS ARE RE-INSTATED
BY THE LI COMMAND FOR PRINTING.
            012074
                        016767
                                     166042 166070
      902
      983
      904
       905
      906
      907
       908
      909 012102
                         121127
                                                              DBLD1:
                                                                          CMPB.
                                     0000743
                                                                                      (R1),#1<
                                                                                                               ;LOOK FOR <15> OR <12>;NO ADJUSTMENT NEEDED
      910 012106
                         001047
                                                                                      HOCRLF.
                                                                          BHE
      911 012110
912 012116
                         126127
001043
                                     000003: 000076
                                                                          CMPB
                                                                                      3(R1),#*>
                                                                                                               ; ARE · BRACKETS · CLOSED ·
                                                                          BNF
                                                                                      NOCRLE -
                                                                                                                      TREAT BRACKET AS CHAR (INVALID)
      913
            012120
                         126127
                                     000001
                                                 000061
                                                                          CMPB
                                                                                      1(R4),#*1
                                                                                                               #FIRST CHAR OF 12 OR 15
#OK CONTINUE
#ILLEGAL 'DATA' CHARACTER
      914 012126
915 012130
916 012134
                         001403
                                                                          BEQ
                                                                                       1$
                                                                                      PC.ERR21
                         004767
                                     0014543
                                                                          JSR
                         000557
                                                                                      DBLDSX-
      918
919
                                                                          PARSE THE SECOND OF THE 2 CHARS BETWEEN THE BRACKETS
       920
            012136
                         012702
                                     000010
                                                                          MOV
                                                                                      #10.R2
                                                              1$:
                                                                                                               START WITH BINARY 10
      921 012142
922 012150
                         126127
                                     000002: 000062
                                                                          CMPB
                                                                                                               ;LINE FEED:
;NO, TRY CR:
;MAKE R2 = 12.
                                                                                      2(R1),#:2
                         001003
                                                                                      2$
                                                                          BHE
      923 012152
924 012156
                         062702
                                     0000021
                                                                          ADD
                                                                                      #2,R2
                         000411
                                                                          BR
                                                                                      4$
                                                                                                               925 012160
                         126127
                                     000002
                                                 000065
                                                                          CMPB
                                                                                      2(R1),#15
      926 012166
927 012170
928 012174
                         001403
                                                                          BEQ
                                                                                      3$
                                                                                      PC,ERR21
                         004767
                                     001414
                                                                          JSR.
                         000537
                                                                                      DBLDSX-
      929
      938
                                                                          MOVE · BINARY · VALUE · TO · MIRROR · TABLE
      931
      932-012176
                        062702
                                                              3$:
                                     000005
                                                                          ADD:
                                                                                      #5,R2
                                                                                                               933 012202 ·
934 012204
                        110225
                                                              4$:
                                                                          MOVB
                                                                                      R2, (R5)+
                        062701
                                     000004
                                                                          ADD:
                                                                                      #4.R1
                                                                                           GCMLEN. 28DJUST COMMAND LINE CHAR COUNT. 7/12 IA-RDP85-00514R000200020001-3
      935 012210
                         162767
                                                                          SUB
                                                  Approved For Release 2005/07/12
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TMA IN-
              0.M1110
                         27+MAR-80 13:39 PAGE 19-1
                                       Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
    936 012216
                   162767
                            000003
                                                                                      ;ADJUST-'DATA: CHAR-COUNT-FOR-THIS LINE
     937
         012224
                  000412
                                                         BR
                                                                  MOVTR
     938
     939
                                                         MOVE-CHARACTER-FROM-COMMAND-LINE TO-MIRROR TABLE
     940
    941 012226
                                               HOCRLF:
     942-012226
                   111125
                                                         MOVE
                                                                   (R4) \cdot (R5) +
                                                                                      :MOVE.CHAR.TO.ASCII SAVE.BUFFER
                                                                                      :END OF BUFFER REACHED
     943 012230
                            0050461
                                                         CMP
                                                                   #DSEND,R5
     944 012234
                   002005
                                                         BGE.
                                                                   1$
                                                                                      :NO. CONTINUE
     945 012236
                   004767
                            001322
                                                         JSR
                                                                   PC.ENDMEM
                                                                                      : ISSUE - MESSAGE
         012242
                   105067
     946
                             172600
                                                         CLRB
                                                                   DSEND -
                                                                                      :CLEAR LAST BYTE OF TABLE
     947
         012246
                   000512
                                                                   DBLDSX
                                                                                      : AND - EXIT-
     948 012250
                   112102
                                                1$:
                                                         MOVE
                                                                   (R1) + R2
                                                                                      :LOAD CHAR FROM COMMAND LINE
     950
                                                         TRANSLATE CHARACTER FROM COMMAND LINE INTO 6-BIT EQUIVALENT
                                                ;
     951
     952-012252-
                                                MOVTR:
     953 012252
                   116202
                                                                                     ;LOAD-6-BIT-CHAR-
;VALID-CHAR, CONTINUE-
;ILLEGAL 'DATA' CHARACTER-
                            005050
                                                         MOVE
                                                                   TR6TBL(R2),R2.
     954 012256
                   002003
                                                                   10$
                                                         BGE
     955 012260
                   004767
                            001324
                                                         JSR
                                                                   PC, ERR21
     956
         012264
                   000503
                                                         BR
                                                                   DBLDSX-
     957
                                                         PUT-6-BIT-CHARACTER-INTO-TABLE-
TAKE-INTO-ACCOUNT-1POSITION1, 4 6-BIT-BYTES-FIT-INTO
3 8-BIT-BYTES: POSITIONS-ARE-0, 1, 2, 3.
     958
     959
     960
     961
                                                         POSITION:
     962
                                                                   00000000 00000000 00111111
                                                         0
     963
                                                                   00000000 00001111 11000000
     964
                                                                   00000011 11110000 00000000
                                                         3
                                                                   11111100 00000000 00000000
     966
     967
                                                         POSITION-0
     968
     969
         012266
                   010203
                                                10$:
                                                         MOV.
                                                                   R2,R3
                                                                                      :COPY-FOR-LATER-USE-
         012270
                   005767
                             165672
                                                         TST.
                                                                   COUNT:
                                                                                      :POSITION-=-0
     971 012274
                   001004
                                                         BNE
                                                                   1$
                                                                                      ; NO, TRY 1
     972-012276
973 012302-
                   142714
150314
                            000077
                                                         BICB
                                                                   #077,(R4)
                                                                                      :CLEAR · AHEAD · OF · BIT · SET
                                                         BISB
                                                                   R3.(R4)
                                                                                      ; 'OR' IN 6 BITS
     974 012304
                   000464
                                                         BR
                                                                  NEXTD:
                                                                                      : GET · NEXT · CHAR
     975
     976
                                                         POSITION-1
     977
     978
         012306
                   122767
                            000001
                                      165652
                                                         CMPB
                                                                   #1,COUNT
                                                                                      ; POSITION - = - 1
     979 012314
980 012316
                                                                                      HO, TRY 2
                   001022
                                                                  2$
                   142703
                             000074
                                                         BICB
                                                                   #074.R3
                                                                                      CLEAR TOP 4 BITS OF 6-BIT CHAR (00111100)
         012322
                   006303
                                                         ASI -
                                                                   R3
                                                                                      SHIFT-2 BITS-LEFT 6
     982-012324
                   006303
                                                         ASL
                                                                   R3
     983 012326
984 012330
                   006303
                                                         ASL
                                                                   R3
                   006303
                                                         ASL
                                                                  R3
R3
     985 012332
                   006303
                                                         ASL
                                                                                                                         ...
     986
987
         012334
012336
                   006303
142714
                                                         ASL
                                                                                      :CLEAR AHEAD OF BIT SET
                            ааазаа.
                                                         BICB
                                                                   #300,(R4)
     988 012342
                   150324
                                                         BISB
                                                                   R3.(R4) +
     989
    990 012344
                                                                                     ;LOAD ORIGINAL CHAR:
;LEAVE:4 BITS:0F:6-BIT:CHAR
                   010203
                                                         MOV.
                                                                   R2,R3
     991 012346
                   006203
                                                         ASR
                                                                   R3
         012350
                   006203
                                                         ASR
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993 012352 994 012356 995 012360	150314	000017			BICB. BISB. BR	#017.(R4) R3.(R4) NEXTD	:CLEAR-AHEAD-OF-BIT-SET- :'OR' IN 6-BIT-CHAR- :GET-NEXT-COMMAND-LINE-CHAR
996	000430			1			*GCT - NEXT - CONNHAD - LINE - CHHR
997 998					POSITI	UN · Z ·	
999 012362		0000021	165576	2 \$:	CMP ·	#2,COUNT	
1 000 012370					BNE ·	3\$;NO, TRY 3
1001 012372		000060	,		BICB:	#060.R3	;CLEAR-2 BITS-(00110000)
	006303				ASL ·	R3	:SHIFT-4 REMAINING BITS-LEF
	006303				ASL:	R3	
1004 012402	006303				ASL.	R3	
1005 012404					ASL:	R3	
	142714	000360			BICB:	#360.(R4)	
1007 012412- 1008	150324			;	BISB.	R3.(R4)+	;"OR" IN PART OF A 6-BIT CH
1000 012414	010203			*	MOV.	R2,R3	:LOAD ORIGINAL CHAR
1010 012416					ASR ·	R3 .	SHIFT 4 BITS RIGHT 4
1011 012420					ASR.	R3	*3011.1 4 D113.410U1.4
1012 012422					ASR.	R3	
1013 012424					ASR.	Ŕ3	
	142714	000003			BICB.	#3 (P4)	*CLEAD AUEAN
1015 012432		000000			BISB.	#3.(R4) R3.(R4)	:CLEAR AHEAD :'OR' IN PART OF 6-BIT CH <u>AR</u>
1016 012434					BR	NEXTD.	, ok. In taktion of bit char
1017				;		1121112	
1018				,	POSITI	0N · 3	
1019				;			-
1020 012436				3 \$:	ASL:	R3	SHIFT-6 BITS-LEFT.2
1021 012440					ASL.	R3	
1022-012442-		000374			BICB:	#374,(R4)	:CLEAR AHEAD
	150324				BISB:	R3,(R4)+	;'OR' IN 6 BITS
1024 012450	012767	177777	.165510		MOV-	#-1,COUNT	COUNT WILL BE RESET TO ZER
1025				;			
1026 012456		165504		HEXTD:		COUNT:	:BUMP 6-BIT BYTE COUNTER.
1027 012462		165454	4		DEC:	GCMLEN.	: DEC · BYTE · COUNTAIN (新年)
1028 012466	001406				BEQ.	DBLDCX-	
1029 012470	000167	177406			JMP.	DBLD1	:PROCESS NEXT-INPUT-CHARACT
1030				3			
1031 012474		165470		DBLDSX:		DATALN:	;AS:THOUGH:RTN:WAS NOT:ENTE
1032-012500					SEC.	5 50 5 1 H	
1033 012502				DOL DOLL	BR	DBLDXX	;AND·EXIT·
1034 012504 1035 012506				DBLDCX:		PC ·	

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TMA IN
                70 M1110 27-MAR-80 13:39 PAGE 20 Approved For Release 2005/07/1 Approved For Release 2005/07/1
    1037
1038
    1039
                                                                  GET COMMAND LINE FROM TERMINAL
    1040
                                                                  OUTPUT:
    1041
                                                                  GCMBUF - WORK AREA TO HOLD COMMAND LINE ##
GCMLEN - LENGTH OF LINE READ
GCMPNT - POINTER TO COMMAND LINE (SET TO POINT TO BEGINNING)
    1042
    1043
     1045
                                                                  SEE- 'FIND' SUBROUTINE-FOR-THE-USE-AND-UPDATING-OF-THESE-FIELDS.
     1046
     1047
     1048
                                                       GCONLY::
     1049 012510
                                                                                                   1050 012510
1050 012510
1051 012514
                      012700
                                 0000201
                                                                  MOV
                                                                             #GCMBUF,R0
                      012701
                                 000120
                                                                  MOV-
                                                                             #80..R1
     1052-012520
                      112720
                                 000040
                                                                  MOVB
                                                                             #40,(R0)+
     1053 012524
                      005301
     1054 012526
                      001374
                                                                  BHE
                                                                             1$
                                                                                                   :NO:
     1055
                                                                             #GCMBLK:
#GCMBLK:R0
           012530
     1056
           012530
012530
012534
012540
012544
                      012700
                                 007614
                                                                  MOV.
                                                                  CLR.
JSR.
MOV.
                      005060
                                 000142
                                                                             G.PSDS(R0)
                                                                             GC. GCML1
G. CMLD(R0).GCMLEN.:SAVE LENGTH
#GCMBUF.GCMPNT - 3TNIT.COMMAND.LINE POINTER
#GCMBUF.R1 :POINT R1 TO COMMAND.LINE
                      004767
                                 000000G
                                 000146 165370
000020* 165364
     1057
                      016067
     1058 012552
                      012767
                                                                  MOV
     1059 012560
1060 012564
                      012701
                                  0000201
                                                                   MOV.
                      000207
                                                                  RTS.
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TMA IN
   1062
   1063
    1064
                                                             PROMPT FOR LOOP ON TEST
    1065
                                                             GIVE DIRECTIONS FOR STOPPING LOOP (AND HANG QIO)
   1066
   1067
    1068
         012566
                                                   LOOPR::
   1069
         012566
                    004767
                              000306
                                                             JSR
                                                                                           :LOOK FOR LOOP OPTION CHAR IN COMMAND LINE:
NOTHING THERE, EXIT:
:LOOP INDICATOR ?
                                                                      PC.FIND.
   1070
         012572
                    103444
                                                             BCS
                                                                      LOOPX.
   1071 012574
                    122711
                              000114
                                                   1$:
                                                             CMPB
                                                                       #*L, (R1)
    1072 012600
                    001410
                                                             BEQ
                                                                      HANG
   1073 012602
                                                                                           YES, SET.LOOP.FLAG.
LOOP OPTION ERROR
PROMPT.FOR.LOOP.OPTION
                    004767
                              001122
                                                                      PC, ERR1
                                                             JSR
   1074 012606
                    004767
   1075 012612
1076 012616
                              001122
                                                             JSR
                                                                      PC.LPTST
PC.FIND
                    004767
                              000262
                                                             JSR
                                                                                           :ANY-RESPONSE:
:NO-LOOP AFTER-ALL
   1076
1077
                    103432
                                                            BCS
                                                                       LOOPX:
         012620
                    000765
                                                            BR
                                                                       1$
   1078
                                                                                           :CHECK - RESPONSE
         012622
012630
   1079
                   052767
052767
                                        165164
                                                  HANG::
                                                            BIS
                                                                      #LOOP, BASE
                                                                                          ;SET-FLAG-FOR-LOOP
;SET-FLAG-FOR-QIO-ISSUED-
;GIVE-DIRECTIONS FOR-STOPPING-TEST
   1080
                              000020
                                                            BIS
                                                                      #ASTFLG, BASE
   1881
         012636
                    004767
                              000726
                                                                      PC,STOP
   1082
   1083 012642
                                                                      #10.ATA,#LUN.TT,...<#AST>
                                                            QIO$S
         012642
                    005046
                                                            CLR
                                                                      -(SP)
-(SP)
         012644
                   005046
                                                            CLR
         012646
                   005046
                                                            CLR
                                                                      -(SP)
         012650
                   005046
                                                            OLP
                                                                      -(SP)
         012652
012654
                   005046
                                                            CLR
                   012746
                             012766
                                                            MOV
         012660
                                                                      #AST.
                                                                             -(SP)
                   005046
                                                            CLR
CLR
                                                                      -(SP)
         012662
                   005046
                                                                      -(SP)
         012664
                   005046
                                                            CLR
                                                                      -(SP)
         012666
                   012746
012746
                                                            MOV
                                                                      #LUN.TT,-(SP)
         012672
                             000000G
                                                            MOV.
                                                                      #10.ATA,-(SP)
         012676
                   012746
                                                            MOV.
                                                                      (PC)+,-(SP)
         012700
012702
                       00 i
                                                            .BYTE
                                                                      1.12
                   104377
                                                                      ±0<377>
   1084
  1085
1086
        012704
                                                 LOOPX:
        012704
                   000207
                                                            RTS
                                                                      PC.
   1087
   1088
   1089
   1090
                                                           KILL - AST -
  1091
   1092
  1093 012706
        012706
012714
012716
  1094
                  032767
                             000020 165100
  1095
                                                                      #ASTFLG, BASE
                                                                                          :WAS AST ISSUED
                  001423
                                                           BEQ
                                                                      1$
                  042767
                             000020
                                                                      #ASTFLG,BASE
                                                           BIC
  1097
        012724
                                                           QIOW⊈S
        012724
012726
                                                                     #IO.DET, #LUN.TT
                  005046
                                                                      -(SP)
                  005046
005046
                                                           CLR
       012730
012732
012734
012736
                                                                     -(SP)
                                                           CLR
                                                                     -(SP)
                  005046
                                                           CLR
                                                                     -(SP)
                                                                                                                                005046
                                                           CLR
                                                                     -(SP)
                  005046
                                                           CLR
                                                                     -(SP)
        012740
                                                                     -(ŠP)
                                                           CLR
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MACRO MillO 27+MAR-80 13:39 PAGE 22
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TMAIN.
    1109
    1110
    1111
                                                                           SCAN-A-TABLE FOR-A-VALID-COMMAND/MNEMONIC-
    1112
    1113
                                                                           RØ = NUMBER OF ENTRIES IN COMMAND TABLE
R1 -> CHAR STRING IN GCML COMMAND LINE
R2 -> TOP OF COMMAND TABLE
    1114
    1115
     1116
    1118
                                                                           R1 -> ROUTINE THAT GOVERNS THE COMMAND (IF MATCH WAS MADE)
R1 -> CHAR STRING IN COMMAND LINE (IF NO MATCH WAS MADE)
R0 = RELATIVE POSITION OF MATCHED ENTRY IN TABLE
    1119
    1121
1122
    1123
    1124 013006
                                                               SCAN::
    1125 013006
                         010346
                                                                           MOV-
                                                                                        R3.-(SP)
                                                                                                                 ;SAVE.R3
                         010046
                                                                           MOV-
                                                                                        R0.-(SP)
                                                                                                                 :SAVE . # . ENTRIES
            013012
                         010146
                                                                           MOV
                                                                                        R1.-(SP)
                                                                                                                 :SAVE POINTER TO BEGINNING OF STRING
     1128
    1129 013014
                                                                                        (SP),R1
#2,R3
                                                                                                                 :POINT.TO.NON-BLANK.IN.COMMAND.LINE.:NUMBER.OF.CHARS.IN.NON-BLANK.FIELD.:DOES.COMMAND.LINE MATCH.TABLE.ENTRY:NO.TRY.NEXT.TABLE.ENTRY:SUB.FROM.LOOP.COUNT.
                         011601
                                                               FHOUT1: MOV
                         012703
                                     000002
     1131 013022
                                                               FHIH1:
                                                                           CMPB
                                                                                        (R1) + (R2) +
    1132-013024
1133 013026
                         001003
                                                                           BNF
                                                                                        FNOUT2
                         005303
                                                                           DEC
                                                                                        R3
     ii34 0i3030
                         001374
                                                                           BNE
    1135 013032
                                                                                                                 :COMMAND FOUND IN TABLE:
:ADD + UNCOMPARED CHARS TO POINTER:
:THEN ADJUST TO NEXT TABLE ENTRY:
:SUB FROM OUTER LOOP COUNT.
                                                                                        FNMTCH
R3.R2
                                                                           BR
    1136
           013034
                         060302
                                                               FHOUT2:
                                                                           ADD
    1137
            013036
                         005202
                                                                            INC
                                                                                        R2.
           013040
                         005300
                                                                           DEC
     1139 013042
                         001364
                                                                           BNE
                                                                                        FHOUT1
                                                                                                                 :TRY-AGAIN-
    1140
           013044
                                                                           MOV
                                                                                        (SP)+,R1
(SP)+,R0
                                                                                                                 : RESTORE COMMAND. LINE. POINTER.
    1141 013046
1142-013050
                         012600
                                                                           MOV.
                         012603
                                                                                                                 :RESTORE R3
:COMMAND NOT-IN-TABLE-
                                                                           MOV
                                                                                        (SP) + R3
     1143 013052
                         000261
                                                                           SEC
    1144 013054
                         000207
                                                                           RTS
                                                                                        PC.
    1145
    1146
           013056
                         010201
                                                                                                                 *POINT-R1 AT-RTN-ADDR-IN-TABLE

*POINT-TO-INCOMING R0 ON-STACK-

*GET-TOTAL-#-TABLE ENTRIES-

*GET-POSITION-OF-MATCHED-ENTRY-

*PUT-IN-R0 FOR-RETURN-
                                                               FNMTCH:
                                                                           MOV
                                                                                        R2,R1
     1147
            013060
                         062706
                                     000002
                                                                                        #2,SP.
(SP)+,R2
                                                                           ADD
           013064
013066
    1148
                         012602
                                                                           MOV
    1149
                         169992
                                                                           SUB
                                                                                        RØ. R2
     1150
            013070
                         010200
                                                                           MOV.
                                                                                        R2,R0
    1151 013072
1152 013074
                        012603
                                                                           MOV.
                                                                                        (SP) + R3
                                                                                                                 RESTORE R3
                         000241
    1153 013076
                        000207
                                                                           RTS
                                                                                        PC
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TMA IN.
    1155
    1156
                                                                FIND THE NEXT NON-BLANK IN THE COMMAND BUFFER.
THEN FIND THE LENGTH OF THE STRING THAT STARTS WITH THAT CHARACTER.
    1157
    1158
    1159
    1160
                                                                                                                                  was in the first
                                                                               NUMBER-OF-UNPROCESSED BYTES-IN-COMMAND-LINE-
    1161
                                                                GCMPNT: - ADDR: OF: NEXT UNPROCESSED: POSITION: IN: COMMAND: LINE
    1162
    1163
    1164
    1165
                                                                R1 -> STRING, R0 = LENGTH OF STRING
    1166
                                                                GCMLEN, GCMPNT-UPDATED FOR NEXT-ENTRY INTO THIS ROUTINE
    1167
                                                                THIS ROUTINE IS DESIGNED TO BE ENTERED A NUMBER OF TIMES IN THE PARSING OF A COMMAND LINE, THE FIELDS GCMLEN AND GCMPNT ARE REFRESHED WHEN A NEW COMMAND LINE IS READ (SEE THE SUBROUTINE GCONLY).
    1168
    1169
    1170
    1171
    1172
    1173
    1174
          013100
                                                     FIND::
    1175 013100
1176 013102
                     010246
                                                                MOM-
                                                                           R2,-(SP)
                                                                                                :SAVE-R2
:#-BYTES REMAINING IN-COMMAND-BUFFER-
    1176 013102
1177 013106
                     016701
                                165034
                                                                MOV-
                                                                           GCMLEN, R1
                                                                BED
                                                                           FSECX-
                                                                                                : THERE - ARE - NONE
    1178 013110
                                                                           GCMPHT, R2
                     016702
                                165030
                                                                MOV
                                                                                                :LOAD CURRENT POINTER:
:LOOK FOR A BLANK:
:OK, BUMP TO NEXT CHAR
    1179 013114
                     122712
                                000040
                                                      1$:
                                                                CMPB
                                                                           #40.(R2)
    1180 013120
                     001403
                                                                BEQ
                                                                           10$
    1181 013122
                     122712
                                                                                                COMMA · IN · COMMAND · L INE · TREAT · COMMA · AS · BLANK ·
                                000054
                                                                CMPB
                                                                           #*..(R2)
    1182-013126
                                                                           2$
                                                                RNF.
    1183 013130
1184 013132
1185 013134
                     005202
                                                     10$:
                                                                INC
                                                                           R2.
                                                                                                ;BUMP POINTER
                     885381
                                                                           R1
                                                                                                SUB-FROM-REMAINING-LENGTH
                     001367
                                                                RNF
    1186 013136
                                                                BR
                                                                           FSECX-
                                                                                                :NO NON-BLANK FOUND
    1187
          013140
    1188
                     010246
                                                     2$:
                                                                           R2,-(SP)
                                                                MOV
                                                                                                :TEMP SAVE POINTER TO BEGINNING OF STRING
    1189
          013142
                     005000
                                                                CLR
                                                                           RØ
    1190
          013144
                     122712
                                000040
                                                     3$:
                                                                           #40.(R2)
                                                                CMPB
                                                                                                :LOOK.FOR.A.BLANK
    1191 013150
                     001407
                                                                BEQ.
                                                                           4$
                                                                                                ;FOUND END OF STRING : TREAT COMMAS AS BLANKS
   1192-013152
1193-013156
                     122712
                                000054
                                                                           #1.,(R2)
                     001404
                                                                BEQ.
                                                                           4$
    1194 013160
                     005202
                                                                INC
                                                                                                :BUMP · POINTER ·
:BUMP · CHAR · COUNT ·
                                                                           R2 -
   1195 013162
1196 013164
                                                                INC
                     005200
                                                                           RØ.
                     005301
                                                                                                ; SUB · FROM · BYTES · REMAINING ·
    1197
          013166
                     001366
                                                                BNF
                                                                           3$
    1198
    1199
          013170
                     919267
                                164759
                                                                MOV
                                                                           R2.GCMPNT
                                                                                                :SAVE POINTER FOR NEXT TIME
          013174
                     010167
                                164742
                                                                MOV.
                                                                           R1.GCMLEN
                                                                                                :SAVE · BYTES · REMAINING · FOR · NEXT · TIME ·
    1201 013200
                                                                MOV
                                                                           (SP) + .R1
                                                                                                : POINTER TO BEGINNING OF STRING
    1202 - 013202
                     012602
                                                                MOM
                                                                           (SP) + R2
                                                                                                RESTORE R2
    1203 013204
                     000241
                                                                CLC:
    1204 013206
                     000207
                                                                RTS
                                                                           PC:
    1205
   1206 013210
1207 013212
                     012602
                                                     FSECX:
                                                                MOV.
                                                                           (SP) + R2
                                                                                                :RESTORE R2
          013212
                     000261
                                                                SEC.
                                                                                                                                  = <del>......</del> , y !.
   1208 013214
                    000207
                                                                RTS
                                                                           PC:
```

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MACRO M1110 27-MAR-80 13:39 PAGE 24 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
TMA IN
    1210
    1211
                                                   :
    1212
                                                             CONVERT A NUMERIC VALUE FROM THE COMMAND LINE.
                                                   ä
   1213
1214
1215
                                                              THE VALUE MAY BE OCTAL, HEX, OR BINARY.
    1216 013216
                                                   PACK::
   1217 013216
1218 013220
013220
                    005046
                                                             CLR
                                                                         (SP)
                                                                                             :CLEAR FOR COND CODE INDICATOR
                                                             SAVE
                                                                        R0.R1.R2.R3.R4.R5
                                                                       RØ,-(SP)
                    010046
                                                             MOV-
          013222
013224
013226
                                                             MOV
                    010246
                                                             MOV.
                                                                        R2,-(SP)
                    010346
                                                             MOV.
                                                                        R3.-(SP)
          013230
                    010446
                                                                        R4,-(SP)
                                                             MOV.
          013232
                    010546
                                                             MOV
                                                                       R5.-(SP)
    1249
    1220
         013234
                                                                       #6.R0
PSECX
                    022700
                               авава6
                                                             CMP
                                                                                            ;UPPER-LIMIT-ON-OCTAL-DIGITS
    1221 013240
                    002413
                                                             BI T
                                                                                            :ERROR EXIT
    1222-013242
                    010146
                                                                       R1.-(SP)
R0.(SP)
                                                             MOV
                                                                                            SAVE STRING POINTER TEMPORARILY ADD CHAR COUNT
    1223 013244
                    060016
                                                             ADD
   1224 013246
1225 013250
                                                                                            GET STRING ADDR INTO RØ FOR SUBRTN-
CONVERT ASCII OCTAL
SUBRTN-PUSHES RØ 1 TOO FAR
                    010100
                                                             MOV
                                                                        R1.R0
                               000000G
                    004767
                                                             JSR.
                                                                        PC,$COTB
    1226 013254
                    005300
                                                             DEC
                                                                        RA.
    1227 013256
1228 013260
                    020026
                                                             CMP
                                                                        R0,(SP)+
                                                                                            :FULL STRING CONVERTED
:NO. ERROR
                    001003
                                                             BNE
                                                                        PSECX-
    1229 013262
                    010167
                               164524
                                                             MOV
                                                                        R1.BINWD
                                                                                            :SAVE · CONVERTED · VALUE ·
   1230 013266
1231
1232-013270
                    000403
                                                             BR
                                                                       PCLCX-
                                                                                            :AND RETURN
                    012766
                                         000014
                                                   PSECX:
                                                             MOV
                                                                        #-1.12.(SP)
                                                                                            ;SET-COND-CODE-INDICATOR-
    1233 013276
013276
013300
                                                             RESTOR
MOV
                                                   POLCX:
                                                                       R0.R1.R2.R3.R4.R5
(SP)+.R5
                    012605
                    012604
                                                             MOV
                                                                        (SP) + .R4
          013302
                    012603
                                                             MOV.
                                                                        (SP)+,R3
          013304
013306
                    012602
                                                             MÖV
                                                                        (SP)+,R2
                    012601
                                                             MOV
                                                                        (SP)+,R1
          013310
                    012600
                                                             MOV
                                                                        (SP) + R0
    1234
    1235
1236
         013312
                    005726
                                                             TST.
                                                                        (SP) +
                                                                                            :GET · COND · CODE · INDICATOR ·
                                                             BLT.
CLC.
BR
         013314
013316
                    002402
                                                                        1$
                                                                                            :DO:SEC
    1237
                    000241
   1238 013320
1239 013322
                    000401
                                                                       PACKX:
                                                                                            : AND - RETURN
                                                             SEC
                    000261
                                                   1$:
    1240 013324
                    000207
                                                   PACKX:
                                                             RTS
                                                                       PC.
```

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TMA IN
          MACRO M1110 27-MAR-80:13:39 PAGE 26
                                           Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    1261
    1262
    1263
                                                               WRITE A PRINT LINE TO TTO
    1264
    1265
    1266 013372
                                                     CONSOL::
    1267 013372 · 013372 ·
                                                               SAVE
                                                                          R0.R1
                     010046
                                                               MOV
                                                                          RØ,-(SP)
          013374
                     010146
                                                               MOV
                                                                          R1.-(SP)
    1268
    1269 013376
1270 013402
1271 013406
                     012700
                                000120
                                                               MOV.
                                                                          #80.,R0
                                                                                               :PRINT-BUFFER-BYTE COUNT:
:POINT-PAST-END-OF BUFFER
:LOOK-FOR_A-NON-BLANK-
                     012701
122741
                                005772*
                                                               MOV-
                                                                          #PRINT+78.,Ri
                                000040.
                                                     1$:
                                                               CMPB
                                                                          #40,-(R1)
    1272 - 013412
                     001003
                                                               BNF .
                                                                          2$
                                                                                                OK, WRITE LINE
    1273 013414
1274 013416
                     005300
                                                               DEC
                                                                          RØ.
                                                                                               :DEC - CHAR - COUNT
                     001373
                                                               BNE
    1275 013420
                     999449
                                                               BR
                                                                          ABEND2.
                                                                                               :NO:NON-BLANKS?
    1276
                                                                          #IO. WVB, #LUN. TT, #EFN. 1., #STAT, . <#PRINT-2, RO, ABEND2
    1277
          013422
                                                     2$:
                                                               QIOW$S
          013422
013424
                     йй5й46
                                                               CLR
                                                                          -(SP)
                     005046
                                                               CLR
                                                                          -(SP)
          013426
                                                                          -(SP)
                                                               CLR
          013430
013432
                     005046
                                                               CLR
                                                                          -(SP)
                                                                          R0.-(SP)
#PRINT-2,-(SP)
                     010046
                                                               MOV
          013434
                     012746
                                0056521
                                                               MOV-
          013440
                     005046
                                                               CLR
                                                                          -(SP)
          013442
013446
                     012746
                                0000041
                                                               MOV
                                                                          #STAT,-(SP)
                     005046
                                                               CLR-
                                                                          -(SP)
          013456
                     112716
                                000001
                                                               MOVE
                                                                          #EFN.1.(SP)
                     012746
012746
                                                                          #LUN.TT,-(SP)
#IO.WVB,-(SP)
          013454
                                                               MOV.
          013460
                                000000G
                                                               MGV.
          013464
                     012746
                                                               MOV.
                                                                          (PC)+_{\star}-(SP)
          013466
                         003
                                   014
                                                               .BYTE
                                                                          3,12.
↑0<377>
          013470
                     104377
          013472
                     103002
                                                                           .+6
          013474
                                000022
                     004767
                                                                JSR
                                                                          PC, ABEND2
    1278
1279
    1280 013500
1281 013504
                     012701
112721
                                                                                               :POINT · TO · STRING ·
                                0056541
                                                               MOV.
                                                                          #PRINT,R1
                                                                                               CLEAR LINE TO BLANKS
                                000040
                                                     4$:
                                                               MOVB
                                                                          #40,(R1)+
          013510
                     005300
                                                               DEC
                                                                          RØ.
                                                                                               : DEC · LOOP · COUNT ·
    1283 013512
                     001374
                                                               BNE
                                                                          4$
    1284
          013514
013514
    1285
                                                               RESTOR .
                                                                          R0.R1
                     012601
                                                               MOV.
                                                                          (SP)+,R1
(SP)+,R0
          013516
    1286 013520
1287
                     000207
                                                               RTS
    1288
          013522
                                                     ABEND2:
                                                               ABRT$S
                                                                          #MYSELF -
          013522
013526
013532
013540
                                                                         #MYSELF,-(SP)
@(SP),-(SP)
#2,2(SP)
@2(SP),2(SP)
(PC)+,-(SP)
                     012746
                                0000007
                                                               MOV
                     017646
062766
                                000000
                                                               MOV
                               999992
                                          000002
                                                               ADD
                     017666
                               000002
                                          000002
                                                               MOV:
          013546
013550
                     012746
123
                                                               MOV
                                   003
                                                                BYTE
                                                                          83..3
          013552
                     104377
                                                               EMT
                                                                          ↑0<377)
```

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TMA IN.
                  0-M1110 27-MAR-80.13:39 PAGE 25
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    1242
                                                                         CONVERT: A: VALUE: FROM: BINARY: TO: PRINTABLE: FORM: Ri =: WORD: TO BE: CONVERTED: R5 -> PRINT: LINE:
    1243
                                                             ;
    1244
                                                             ;
    1245
1245
1246
1247
1248 013326
                                                             UNPK::
    1249 013326
013326
013330
                                                                         SAVE
                                                                                     R0.R1.R2,R3,R4
                                                                                    R0.-(SP)
R1.-(SP)
R2.-(SP)
R3.-(SP)
                        010046
                                                                         MOV:
                        010146
                                                                         MOV:
            013332
                        010246
                                                                         MOV.
            013334
                        010346
            013336
                        010446
                                                                         MOV:
                                                                                     R4.-(SP)
     1250
                                                                                                             :PREPARE TO CALL SYSTEM SUBRTN:
:KEEP LEADING ZEROS
:CONVERT TO OCTAL ASCII:
:RESTORE PRINT LINE POINTER
                                                                                     R5.R0
#1.R2
     1251 013340
                        010500
                                                                         MOV-
     1252-013342-
                        012702
                                    000001
                                                                         MOV.
     1253 013346
                        004767
                                    000000G
                                                                         JSR
                                                                                     PC, $CBOMG
    1254 013352-
1255 013354
1256
1257 013356
                        010005
                                                                         MOV-
                                                                                     R0.R5
                        885285
                                                                         INC
                                                                                                             : AND BUMP IT
                                                             UNPKX:
     1258 013356
013356
                                                                         RESTOR.
                                                                                     R0,R1,R2,R3,R4
                                                                                     (SP)+.R4
(SP)+.R3
(SP)+.R2
(SP)+.R1
                        012604
012603
012602
                                                                         MOV.
            013360
                                                                         MOV
            013362
                                                                         MOV.
            013364
                        012601
                                                                         MOV.
            013366
                        012600
                                                                         MOV-
                                                                                     (SP) + .R0
     1259 013370
                        000207
                                                                         RTS
```

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TMA IN
              0 M1110 27-MAR-80 13:39 PAGE 27
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   1290
   1291
   1292
                                                           WRITE TO TTO AND PROMPT.
   1293
   1294
   1295
         013554
013560
                   005267
                             164230
                                                 ENDTST:: INC
                                                                     ERWORD
   1296
                   005267
                             164224
                                                 EHFILE::
                                                            INC
                                                                     ERWORD
   1297
         013564
                   005267
                             164220
                                                 ENDMEM:: INC
                                                                     ERWORD
   1298
         013570
                              164214
                                                 STOP::
                                                           TNC
                                                                     ERWORD
   1299
         013574
013600
                   005267
                              164210
                                                 OUT1::
                                                           INC
                                                                     ERWORD
   1300
                   005267
                             164204.
                                                 ERR23::
                                                                     ERWORD
    1301
         013604
                   005267
                              164200
                                                 ERR22::
                                                           INC
                                                                     ERWORD
    1302-013616
                    005267
                              164174
                                                 ERR21::
                                                           INC
                                                                     ERWORD
    1303 013614
                   005267
                              164170
                                                 ERR20::
                                                                     ERLIORD
    1304 013620
                   005267
                                                          ONI
CNI
                              164164
                                                 ERR19::
    1305 013624
                    005267
                              164160
                                                 ERR18::
ERR17::
                                                                     ERWORD
         013630
013634
    1306
                   005267
                                                           INC
                                                                     FRUORD
    1307
                   005267
                             164159
                                                 ERR16::
                                                                     ERWORD
         013640
                   005267
                             164144
                                                 ERR15::
                                                           INC
                                                                     ERWORD
    1309 013644
1310 013650
                   005267
                              164140
                                                 ERR14::
                                                           INC
                                                                     ERMORD
                   005267
                             164134
                                                 ERR13::
                                                                     ERWORD
    1311 013654
                   005267
                             164130
                                                 ERR12::
                                                           IHC
                                                                     ERWORD
    1312-013660
                   005267
                              164124
                                                 ERR11::
                                                           INC
                                                                     ERWORD -
   1313 013664
1314 013670
                   005267
                             164120
                                                 ERR10::
                                                           INC
                                                                     ERLIORD.
                   005267
                             164114
                                                 ERR9::
                                                                     ERWORD.
    1315 013674
                   005267
                              164110
                                                 ERR8::
                                                           INC
                                                                     ERWORD
   1316 013700
                   005267
                              164104
                                                 ERR7::
                                                           INC
                                                                     ERLIDED
                   885267
                             164100
                                                           INC
                                                                     ERMORD
   1318
         013710
                   005267
                             164974
                                                 ERR5::
                                                                     ERWORD
   1319 013714
                             164070
                   005267
                                                           IHC:
IHC:
IHC:
                                                 ERR4::
                                                                     ERWORD
   1320 013720
1321 013724
                   005267
                              164064
                                                 ERR3::
                                                                     ERLIORD.
                   005267
                             164969
                                                 ERR2::
                                                                     ERWORD
   1322
         013730
                   005267
                             164054
                                                 ERR1::
                                                           INC
                                                                     ERWORD
   1323
   1324 013734
1325 013734
1326 013740
                                                 NESTOP:
                   005267
                             164050
                                                 LPTST:: INC
                                                                    ERWORD.
                   005267
005267
                             164944
                                                 SELTST:: INC
                                                                                                                                       Ξ.
                                                                    ERWORD
   1327 013744
                             164040
                                                 BASEL:: INC
                                                                     ERWORD
   1328
                                                                                                                                NEST.
                                                                     <.-NESTOP>/4
   1329
   1330
                                                           USE THE INDEX ERWORD TO COUNT UP FROM THE BOTTOM OF THE MESSAGE TABLE. FIND THE END OF THE MESSAGE FIRST.
   1331
   1332
                                                           THEN THE BEGINNING, THEN GET THE LENGTH:
   1333
   1334
         013750
                   @16702<sub>33.</sub>
                             164034.
                                                           MOV
                                                                     ERWORD, R2
                                                                                        :LOAD LOOP-COUNT-
:POINT-TO-END-OF-MESSAGE-TABLE
:LOOK-FOR-END-OF-MESSAGE-
   1335
         013754
                   012701
                             007613
                                                                     #ASCIZ,R1
         013760
                   105741
                                                 15:
                                                           TSTB
                                                                     -(R1)
   1337
1338
         013762
                   001376
                                                           BNE -
                                                                     1$
                                                                                        :LOOP COUNT
:BACK UP ANOTHER MESSAGE
:SAVE POINTER TO END OF MESSAGE
:BACK UP TO BEGINNING OF MESSAGE
         013764
                   005302
                                                                    ŘŽ.
   1339
         013766
                   001374
                                                           BNE
                                                                     1$
         013770
   1340
                                                                    R1.R0
                                                          MOV
   1341
         013772
                   105741
                                                 2$:
                                                           TSTB
                                                                     -(R1)
   1342
         013774
                   001376
                                                          BHE.
                                                                    2$
   1343 013776
                                                                    R1
                                                                                        ;BUMP.TO FIRST.CHAR.OF.MESSAGE
;R0 NOW.=:MESSAGE.LENGTH.
                                                           INC
   1344 014000
                   160100
                                                          SUB
                                                                    R1.R0
   1345
   1346 014002
```

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TMA IN
          014002
                     005046
                                                                CLR
CLR
                                                                           -(SP)
          014004
                     005046
                                                                           -(SP)
          014006
                                                                CLR
                                                                           -(SP)
          014010
                     005046
                                                                CLR
                                                                           -(SP)
          ñ14ñ12
                     010046
                                                                MOV
                                                                           R0,-(SP)
          014014
                     010146
                                                                MOV
                                                                           R1.-(SP)
          014016
                     005046
                                                                CLR
                                                                           -(SP)
          014020
                     012746
                                0000041
                                                                MOV
                                                                           #STAT, -(SP)
          ñ14ñ24
                     005046
                                                                CLR
                                                                           -(SP)
          014026
                     112716
                                000001
                                                                MOVB
                                                                           #EFN.1,(SP)
           014032
                     012746
                                000001
                                                                           #LUN.TT,-(SP)
#IO.WVB,-(SP)
(PC)+,-(SP)
                                                                MOV.
                                000000G
           014036
                     012746
                                                                MOV.
                     012746
          014042
                                                                MOV.
           014044
                         003
                                    014
                                                                 .BYTE
                                                                           3,12.
           014046
                      104377
                                                                FMT
                                                                           ◆0<377>
          014050
                     103002
                                                                BCC
                                                                           . +6
           014052
                     004767
                                000114
                                                                           PC.ABEND
    1347
    1348
          014056
                                                                GLEF$S
                                                                           #EFH.1
                     012746
012746
037
          014056
014062
                                                                MOV.
                                                                           #EFN.1,-(SP)
                                                                           (PC)+,-(SP)
31.,2
                                                                MOV.
           014064
                                    002
                                                                 .BYTE
          014066
                      104377
                                                                EMT.
                                                                           <u></u>40<377>
    1349
          014070
014074
                     105767
003436
                                163710 :::
                                                                TSTB
                                                                           STAT
                                                                                                :GOOD RETURN
    1350
1351
                                                                BLE
                                                                                                : NO -
    1352
1353
                                                                ISSUE - GCML -
    1354
          014076
                     022767
                                                                                                :PROMPT·WITH·MESSAGE
:NO. JUST·EXIT·
                                000003 163704
                                                                CMP.
                                                                           #HEST, ERWORD
    1355
          014104
                     002427
                                                                BLT.
                                                                           TTX-
    1356 014106
                     012700
                                000020*
                                                                                                #POINT TO COMMAND LINE BUFFER : NUMBER OF BYTES IN BUFFER : CLEAR COMMAND LINE : FINISHED?
                                                                MOV.
                                                                           #GCMBUF,R0
    1357
          014112
                     012701
                                000120
                                                                MOV.
                                                                           #80.,R1
    1358 014116
                     112720
                                000040
                                                                MOVB
                                                                           #40.(R0)+
    1359
          014122
                     005301
                                                                DEC:
                                                                           R1
    1360
          014124
                     001374
                                                                RNF
                                                                           3$
                                                                                                :NO:
    1361
    1362
1363
                                                                ISSUE-'GET-COMMAND-LINE'
SET-UP-FIELDS:
                                                                                                                                          <del>47</del>37
    1364
                                                                GCMBUF - WORK AREA TO HOLD COMMAND LINE
GCMLEN - LENGTH OF LINE READ
    1365
                                                                                                                         ...
    1366
                                                                             POINTER TO COMMAND LINE (SET TO POINT TO BEGINNING)
                                                                GCMPNT
    1367
          014126
014126
    1368
                                                                           #GCMBLK.
#GCMBLK.R0
G.PSDS(R0)
                                                                GCML$
                     012700
                                0076141
                                                                MOSA.
                     005060
004767
          014132
                                000142
                                                                CLR
          014136
                                000000G
                                                                JSR
                                                                           PC..GCML1
    1369 014142
                     103413
                                                                BCS
                                                                           ABEND -
    1370 014144
                     016067
                                000146
                                         .163770
                                                                MOV.
                                                                           G:CMLD(R0),GCMLEH:;SAVE:LENGTH:
    1371 014152
1372 014156
                     012701
                                0000201
                                                                           #GCMBUF.R1
#GCMBUF.GCMPNT
                                                                MOV
                                                                                                :POINT TO COMMAND BUFFER
:INITIALIZE COMMAND BUFFER POINTER
:CLEAR ERROR NUMBER UNDICATOR
                               0000201
                     012767
                                          163760
                                                                MOV:
    1373
          014164
                     005067
                                163629
                                                     TTX:
                                                                CLR
                                                                           ERWORD.
    1374 014170
                     000207
                                                                RTS
                                                                           PC.
                                                                                                :AND RETURN
    1375
          014172
014172
                                                     ABEND:
                                                                ABRT$S⊹
                                                                           #MYSELF
                                                                                                                                 15
                     012746
                               0000004
                                                                MOV.
                                                                          #MYSELF,-(SP)
@(SP),-(SP)
          014176
014202
                     017646
062766
                               000000
                                                                MOV
                                          ติดดดดอ
                                            ଉପଣଥ
Approved For Release 2005/07/1
                               000002
                                                                                      CIA-RDP85-00514R000200020001-3
```

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1377 1378 010516' : END: START-

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TMA IN
           MACRO M1110 27-MAR-80 13:39 PAGE 27-3
SYMBOL TABLE
                                                   Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                     BYTE20 4 · 000024
                                                                           BYTE72= 000110
ABEND
            014172R ·
                                                                                                                DBI D
                                                                                                                             012074RG
                                                                                                                DBLDSX 012504R F.ACTL = 000076

DBLDSX 012504R F.ALOC = 000040 ... DBLDSX 012506R F.BBFS = 000062 F.BBF = 000062 F.BBF = 000062
                                                                                                                                                      FSECX.
                                                                                                                                                                013210R
                                     BYTE21= 000025
                                                                           BYTE73= 000111
ABEND2 -
            013522R
                                     BYTE22= 000026
AHIGH-
            000206R9
                                                                           BYTE74= 0000112
            000210RG
                                     BYTE23= 0000027
                                                                           BYTE75= 000113
                                                                                                                                                     F.BBFS= 000062
F.BDB = 000070
F.BGBC= 000057
                                     BYTE24= 000030
BYTE25= 000031
                                                                           BYTE76=-000114
BYTE77=-000115
ALUCKE=-040000
                                                                                                                DBR.RD= 000001
ALU0E - - 004000
APLACE 000016RG
                                     BYTE26 = 0000032
                                                                           BYTE78= 000116
                                                                                                                DB$CPP=-001457
DB$SPT=-000026
                                                                                                                                                      F.BKDN= 000026
                                                                           BYTE79= 000117
BYTE8 = 000010
BYTE80= 000120
ASCIZ
AST
                                     BYTE27 = . 000033
BYTE28 = . 000034
            007613R
                                                                                                                                                     F.BKDS= 000020
F.BKEF= 000050
F.BKP1= 000051
F.BKST= 000024
                                                                                                                DB$TPC= 000023
DF1 = ********** GX**
            012766R-
                                     BYTE29 - 000035
BYTE3 - 000003
BYTE30 - 000036
ASTFLG= 000020 G
ASTWRD 000146R.
A01 = 010000
                                                                           BYTE81=-000121
BYTE82=-000122-
BYTE83=-000123
                                                                                                                DISPGS= 100000
                                                                                                                                                     F.BKST= 000024
F.BKVB= 000064
F.CHR = 000075
F.CNTG= 000034
F.DFNB= 000046
                                                                                                                DMAAWR = - 000005
BASE:
            000014RG
                                     BYTE31 = . 000037
                                                                                                                DMARRD = . 000003
            013744RG
                                     BYTE32= 000040
BYTE33= 000041
BASEL -
                                                                           BYTE84= 000124
                                                                                                                DMARWR = . 000004
                                                                           BYTE85=-000125
BYTE86=-000126
BYTE87=-000127
BHIGH:
                                                                                                                DPLUS.
                                                                                                                            000172RG
            000012RG
                                     BYTE34= 000042
                                                                                                                DSAVE :
                                                                                                                            002322RG
                                                                                                                                                      F.DSPT= 000044
                                     BYTE35= 000042
BYTE35= 000043
BYTE36= 000044
BYTE37= 000045
BYTE38= 000046
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                                                                                                                            005046RG
000322RG
                                                                                                                                                   F.DVNM= 000134
F.EFBK* 000010
                                                                           BYTE88= 000130
                                                                                                                DTBL -
                                                                           BYTE89= 000131
BYTE9 = 000011
                                                                                                                EFN.1 = 000001 G
                                                                                                                                                     F.EFN = 000050
BIT10 = 002000
BIT11 = 004000
BIT12 = 010000
                                                                                                                                                     F.EOBB=-000032
F.ERR-=-000052
F.FACC=-000043
                                                                                                                ENBR -
                                                                                                                         = 010000
                                                                                                                ENDMEM 013564RG
ENDTST 013554RG
                                     BYTE39= 000047
BYTE4 = 000004
BYTE40= 000050
                                                                           BYTE90= 000132
                                                                           BYTE91= 000133
BIT13 = 020000
                                                                           BYTE92 = 000134
BYTE93 = 000135
                                                                                                                ENFILE: 013560RG
                                                                                                                                                      F.FFBY= 000014
BIT14 = 040000
BIT15 = 100000
                                                                                                                                                     F.FRBY= 000014
F.FNAM= 000110
F.FNB = 000102
F.FTYP= 000116
F.FVER= 000120
                                      BYTE41 = . 000051
                                                                                                                         = ******* GX*
013730RG*
                                                                                                                FN1
                                      BYTE42=-000052
                                                                           BYTE94= 000136
                                                                                                                ERR1
BIT2 - 000004
                                      BYTE43= 000053
                                                                           BYTE95= 000137
                                                                                                                ERR10
                                                                                                                             013664RG
         = 0000010
                                                                           BYTE96=-000140
BYTE97=-000141
BYTE98=-000142
BIT3
                                     BYTE44= 000054
BYTE45= 000055
                                                                                                                ERR11
                                                                                                                             013660RG-
                                                                                                                             013650RG - 013650RG - 013650RG
         = 0000020
                                                                                                                 ERR12
                                                                                                                                                      F.HIBK= 000004
         = 000040
                                      BYTE46= 000056
                                                                                                                                                     F.LUN = 000004
F.MBCT= 000054
F.MBC1= 000055
F.MBFG= 000056
                                                                                                                ERR13
         = · 000100
= · 000200
BIT6
                                      BYTE47=-000057
                                                                           BYTE99=-000143
                                                                                                                ERR14
                                                                                                                             013644RG - 013640RG -
                                     BYTE48=-000060
BYTE49=-000061
BYTE5 =-000005
BIT7
                                                                           BYTVAL = . 000144
                                                                                                                ERR15
          = 000400
BIT8
                                                                           CBKALL = . 001000
                                                                                                                 ERR16
                                                                                                                             013634RG
          = 001000
                                                                           CBKCLK= 000400
CHIGH 000216RG
                                                                                                                ERR17
                                                                                                                             013630RG
                                                                                                                                                      F.NRBD= 000024
BLOW-
            000214RG
                                      BYTE50= 000062
                                                                                                                ERR18
                                                                                                                             013624RG - 013620RG -
                                                                                                                                                     F.NREC= 000030
F.OVBS= 000030
                                                                           CHLEN 000176RG
CH1 = ******* GX-
CLOW 000220RG
                                     BYTE51=-000063
BYTE52=-000064
BTEND
            005450RG
                                                                                                                ERR19
            005452RG
BTOVER:
                                                                                                                                                      F.RACC=,0000016
F.RATT= 000001
                                                                                                                ERR2
                                                                                                                             013724RG
BTRANS
                                      BYTE53= 000065
                                                                                                                ERR20
                                                                                                                             013614RG
                                     BYTE54= 000065
BYTE54= 000066
BYTE55= 000067
BYTE56= 000070
BYTE57= 000071
BUFCX:
BUFCX2:
                                                                                                                            013610RG ...
013604RG ...
            010770R
                                                                           CMILUN = . 000002 . G .
                                                                                                                ERR21
                                                                                                                                                      F.RCNM= 000034
                                                                                                                                                      F.RCTL = 000034
F.RSIZ= 000002
F.RTYP= 000000
            011206R
                                                                           CHOBRE = 100000
                                                                                                                ERR22
BUFFSA.
            010626RG
                                                                           CNTLX: 011400R:
CNUM: =:000015 G:
COMXX: 010522RG
                                                                                                                 ERR23
                                                                                                                             013600RG
BUFSET:
            011014RG
                                                                                                                             013720RG
013714RG
                                                                                                                ERR3
                                     BYTE58=-000072
BYTE59=-000073
BYTE6 =-000006
BUFS2 -
            011004RG
                                                                                                                ERR4
                                                                                                                                                      F.SEON= 000100
F.SPDV= 000072
BUFXX.
            011002R
                                                                           CONSOL.
                                                                                       013372RG
                                                                                                                 ERR5
                                                                                                                             013710RG
            011220R
                                                                           COUNT:
                                                                                                                ERR8 913674RG F.UNIT 000020
ERR9 P13674RG F.UNIT 000136
ERR9 F.URBD 000020
ERUORD 000010R F.URBD 000020
                                                                                                                ERR6
ERR7
                                                                                       000166RG
                                                                                                                             013704RG
                                                                                                                                                      F.SPUN= 000074
BYTE0 = 000000
BYTE1 = 000001
                                      BYTE60 = . 000074
                                                                           CPCCEN - · 010000
                                     BYTE61=-000075
BYTE62=-000076
                                                                           CPREAD = 040000
CPWRTE = 020000
                                                                                                                                                 F.URBD= 000020

F.VBN= 000064

F.VBSZ= 000060*

GCMBLK 007614R
BYTE10= 000012
BYTE11=-000013
                                      BYTE63=-000077
                                                                           CSADRD= 0000004
BYTE12=-000014
BYTE13=-000015
                                                                                                                EX1 010620R
FD:CCL= ******** GX
                                      BYTE64= 000100
                                                                           CSEQCI = 100000
                                      BYTE65=-000101
                                                                           CSOE - - 000040
BYTE14= 0000016
                                     BYTE66=-000102
BYTE67=-000103
                                                                                                                                                      GCMBUF
                                                                           CSWRTE = .000100
                                                                                                                 FD:REC= · ******** GX ·
                                                                                                                                                                  000020RG
BYTE15= 000017
BYTE16= 000020
BYTE17= 000021
                                                                                                                FD.TTY= ******* GX-
FIND 013100RG
                                                                           CTBL -
                                                                                       000236RG
                                                                                                                                                      GCMLEN-
                                                                                                                                                                  000142RG
                                      BYTE68=-000104
                                                                           DATALN.
                                                                                       000170RG
                                                                                                                                                      GCMPNT -
                                                                                                                                                                  000144RG
                                                                                                                 FNIN1 013022R
FNMTCH 013056R
                                     BYTE69=-000105
BYTE7 =-000007
                                                                                                                                                   GCONLY, 012510RG
GE.BIF 177775
                                                                           DATA1
                                                                                        000200RG
BYTE18= 000022
                                                                           DATA2 ·
                                                                                        000202RG
                                                   BYTE19=-000023
                                      BYTE70= 000106
                                                                                                                                                      GE.CLO= 000004√
BYTE2 - = - 0000002
                                      BYTE71=.000107
                                                                                                                                                      GE.COM= 000001
```

A. A. IV

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TMAIN M1110 27-MAR-80 13:39 PAGE 27-4 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                 MYSELF' 000000R
N· = 000144
NEST· = 000003
GE:CON= 000020
                                                                  Q$CP2 -- 000260
                                                                                                   RTHPT.
                                                                                                              000150RG
                                                                                                                                     T$CD
GE:E0F=-177766
                                                                  Q$CSC = 010000
                                                                                                   RU1
                                                                                                          = · ****** GX ·
                                                                                                                                     T$CLK = 002000
                                                                                                   SCAN 013006R6 SELTST 013740RG
GE.IND= 000002
GE.IOR= 177777
                                                                  Q$CSEL=-000360
                                                                                                                                     T$DISK=:000200
                                 NESTOP
                                            013734R
012456R
                                                                  Q$CSET= : 000002
                                                                                                                                     T$DRD - 000004
                                                                  Q$CSP.=.020000
Q$DMA.=.000001
GE.LC = 0000010
                                 NEXTD.
                                                                                                   SEQ.CI= 000010
                                                                                                                                     T$EMEM= 010000
GE.MDE=-177774
GE.OPR=-177776
                                 NOCRLF 012226F
N.DID-=-000024
                                            012226R
                                                                                                   SET-
                                                                                                              011022R
                                                                                                                                     T$FSAA= 000000
T$FSAB= 000004
                                                                  Q$ENBK = . 040000
                                                                                                   START:
                                                                                                              010516R
GE.RBG=-177730
                                 H.DVHM= 000032
                                                                  Q$ENOP= 020000
                                                                                                   STAT:
                                                                                                              000004RG
                                                                                                                                     T$FSAC= 000014
                                                                  Q$FAL = 004000
Q$FC = 000045
Q$FC = 000044
Q$FP = 000046
GE:SIZ= 000040
G:CMLD= 000146
                                 H.FID -- 000000
                                                                                                   STOP:
                                                                                                              013570RG
                                                                                                                                     T$FSB2=:000010
                                 M.FNAM= 000006
                                                                                                   ST1
                                                                                                            = · ****** GX
                                                                                                                                     T$IB = 000026
G.DPRM= 000160
                                 N.FTYP= 000014
                                                                                                   S$CLR - = - 000000
                                                                                                                                     T$IBAR=:000024
G.ERR = 000140
G.ISIZ= 000020
                                 N.FVER= 000016
                                                                                                   S$LA = 000001
S$QB = 000005
                                                                                                                                    T$IBE - = 020000
T$IBF - = 040000
                                                                  Q$HBF · = · 000002
                                 N:NEXT= 000022
G.LPDL= 000060
                                 N.STAT= 000020
                                                                                                   S$QR - - 000006
                                                                  Q$ICP -- 000006
                                                                                                                                     T$ICD - = - 000040
G.MODE=-000141
                                 H. HHIT= 000034
                                                                                                                                    T$MODE = 004000
T$OB = 000036
T$OBE = 004000
                                                                  Q$IHB-=-000003
                                                                                                   S$QX-
                                                                                                           = .000004
G.PSDS= 000142
                                 OFFSET
                                            012006RG
                                                                  Q$IHRL= 000002
Q$IMRP= 000007
                                                                                                   S$SR
                                                                                                           = 0000007
G.SIZE=-000224
                                 OFF6
                                            000174RG
                                                                                                          = 000010
= 000014
                                                                                                   S$S1
HANG.
           012622RG
                                 OHIGH
                                            000226RG
                                                                  Q$LBD - = -001000
                                                                                                   9$92
                                                                                                                                     T$0BF · = · 010000
IHIGH:
           000222RG
                                            000230RG
                                                                  Q$LBDP=-001001
                                 OLOW-
                                                                                                   S.BFHD= 000020
S.FATT= 000016
                                                                                                                                     T$0BRA= · 000034
ILOW-
           000224RG
                                 ONCE -
                                         --000010 G
                                                                  Q$LBP -- 000001
                                                                                                                                     T$0BWA=.000032
INCVAL: 000160RG
                                          = 002000 G
                                 OUT:
                                                                  Q$LDCD=-000003
                                                                                                   S.FDB -- 000140
                                                                                                                                     T$0UTA= 100000
IO:ATA≕ жжжжжжж G
                                            013574RG
                                 OUT1
                                                                  0$LDMD= 000004
                                                                                                   S.FNAM=.000006
                                                                                                                                     T$RBD0=.000200
IO.DET= ******* G
                                            013216RG
                                                                  Q$LDPP= 002000
                                                                                                   S.FNB = 000036
                                 PACK
                                                                                                                                     T$RNB - = - 000040
IO:RVB= ******* G
                                                                  Q$LHP -= 010000
Q$MNC -= 140000
Q$MR -= 000052
                                            013324R
                                 PACKX:
                                                                                                   S.FNBW= 000017
                                                                                                                                     T$RSET=-040000
IO.WVB= ******* G
                                 PAR$$$=
                                            000027
                                                                                                   S.FNTY= 000004
                                                                                                                                     ±$50 -= 000022
         012706RG
                                 PCLCX-
                                                                                                   S.FTYP= 000002
S.NFEN= 000020
                                                                                                                                    T$SEG1 = 0000022
T$SEG1 = 000000
                                            013276R
LDCHTL : 011222RG : 
LD1 = : ****** GX : 
LI1 = : ******* GX :
                                                                  Q$MRP - = - 0000040
                                 PCHTLX
                                            011706R
                                                                  Q$MRP2=.000040
Q$MRP2=.000240
Q$MSC:=.04000
Q$MSET=.000004
Q$MSP:=.100000
Q$MSP:=.176000
                                 PDATA:
                                            011402RG
                                                                                                                                     T$SEG2=\000001
T$SEG3=\000002
T$SO =\000001
                                                                                                   TD$CTR=:176370
TD$CTW=:176360
                                 PDCCX:
                                            011606R
LOC:EN= 000100
                                 PDCX:
                                            011600R
                                                                                                    TD$INL= 004000
LOC:WA= 040000
                                 PDDX
                                            011612R
                                                                                                   TD$MEM= 000270
TD$OAR= 176344
TD$OTR= 176346
                                                                                                                                     T$UBUS≕ 100000
LOC:WB= 100000
LOOP = 000004 G
LOOPR 012566RG
                                 PDVX
                                            011572R
                                                                                                                                     T$1CLK= 000400
                                                                  Q$PP- = 000100
Q$PPSW= 000320
Q$PP2 = 000300
                                 PLB.
                                         = 000010
                                                                                                                                     T$8BEN= 000020
                                 PLC.
                                          = -000020
                                                                                                   TD$QRD=:000274
TD$SW:=:176376
                                                                                                                                     UBD.IN=#000020
LOOPX.
           012704R
                                 PLD
                                          = 000030
                                                                                                                                   "UNPK
                                                                                                                                               013326RG
           013734RG
                                 PLRWR - = - 000200
                                                                  Q$QHLT= 000013
                                                                                                    TD$TAR≂ 176372
                                                                                                                                    UNPKX.
                                                                                                                                               013356R
LUN.TT= 000001 G
                                 PLR:EN= 000200
                                                                  Q$QL -- 000043
Q$QLA -- 000053
                                                                                                    TD$TAW≕-176362
                                                                                                                                               000164RG
MAREN1≃-000001
                                            011614RG
                                 PRCHTL
                                                                                                   TD$TDR= · 176374
TD$TDW= · 176364
                                                                                                                                    WORD0 = 000000
MAREN2=:004000
                                 PRDATA
                                            011710RG
                                                                  Q$QLB.=.000054
                                                                                                                                    WORD1 = 999992
MARLOD = 010000
                                 PRDX-
                                                                  Q$QLR -- 000001
Q$QW -- 000042
                                                                                                              000232RG
                                            012004R
                                                                                                                                     WORD10= 0000024
                                                                                                    THIGH-
MAROUT= 000002
MAR:LO= 002000
MAR:OU= 000040
                                 PRINT:
                                            005654RG
                                                                                                    TL OUG.
                                                                                                              000234RG
                                                                                                                                     WORD11= 000026
                                 PR1 = ********* GX*
PSECX: 013270R:
                                                                  Q$RDCD= 000005
                                                                                                    TRFDB
                                                                                                                                    WORD12= 000030
WORD13= 000032
                                                                                                              010320RG
                                                                  Q$RDMD= 000006
                                                                                                    TRLUN
MBKALL= 001000
                                         = 001000 G
                                                                  Q$REBK = . 001000
                                                                                                   TRNMB # 0.10450R #
                                                                                                                                     WORD14= 000034
MBKCLK = · 000400
                                          = 000400 G
                                                                  Q$RNC - = - 006000
                                                                                                                                     WORD15=-000036
                                 OR$CR1=:176420
QR$CR2=:176422
MEND.
          000156RG
                                                                  Q$RSC -- 004000
                                                                                                    TR6TBL 005050RG
                                                                                                                                     WORD16=-000040
WORD17=-000042
MMADRD = . 000100
                                                                  Q$RSET= 000010
                                                                                                    TTX-
                                                                                                              014164R
MMLEFT= 000002
                                 QR$LBR=-176424
                                                                  Q$SM- = 100000
Q$SP- = 000120
                                                                                                    TXTFDB: 010122RG
                                                                                                                                     WORD18 = 000044
MMOE - - 000004
MMWRTE - 000010
                                 Q$ATTH= 000100
Q$BCL = 000001
Q$CCCP= 000040
                                                                                                    TXTLUN= 000003 G
                                                                                                                                     WORD19=-000046
                                                                  Q$SP2·=·000340
                                                                                                    TXTHMB: 010262R:
T$AD: =:000020
T$BA: =:000002:
                                                                                                                                     WORD2 - - 000004
WORD20 - 000050
MHOBRE = 100000
                                                                          = · жжжжжжж GX
                                                                  RF 1
                                 Q$CHB: = :000400
Q$CHRL = :000200
MOVTR 012252
MREN1 = 000001
           012252R
                                                                  RGQ:EN=:000200
                                                                                                                                     WORD21= 000052***
                                                                  RGQ:VA= 020000
                                                                                                           = 000010
                                                                                                    T$BD -
                                                                                                                                     WORD22≈ 000054
MREN2 - = - 020000
                                                                                                   T$BSO·=·100000
T$BT·=·000020
                                 OSCLR · = · NANA4A
                                                                  RIDE: = 000100 G
RP = 000200 G
                                                                                                                                     WORD23= 000056
           000152RG
                                 Q$CNC · = · 030000
                                                                                                                                     WORD24= 000060
           000154RG
MSTR2
                                                                  RSPCNT 000162RG
                                 0$0P -
                                                                                                    T$BTAR= 000030
                                                                                                                                     WORD25= 000062
WORD26= 000064
MSYN - 000040
                                             300010 RS1 010606R T$BTTD = 002000
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                                 Q$CPCC=-000010
```

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TMAIN.
           MACRO-M1110 27-MAR-80 13:39 PAGE-27-5
SYMBOL TABLE
                                                Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                   WORD45= 000132
WORD46= 000134
WORD47= 000136
WORD27= 000066
                                                                      WORD63=-000176
                                                                                                         WORD81=-000242
                                                                                                                                            WORD99=-000306
WORD28=-000070
                                                                      WORD64= 000200
                                                                                                         WORD82= 000244
                                                                                                                                            WRDVAL = . 000310
WORD28= 000070
WORD29= 000072
WORD3 = 000006
WORD30= 000074
WORD31= 000076
                                                                      WCRD65=-000202
WORD66=-000204
                                                                                                         WORD83= 000246
                                                                                                                                            WWORDS: 000200RG
XTREAD=:001000
                                   WORD48 = 000140
                                                                                                         WORD84= 000250
                                   WORD49= 000142
WORD5 = 000012
                                                                      WORD67= 000206
                                                                                                         WORD85= 000252
                                                                                                                                            XTWRTE = 000400
                                                                      WORD68=-000210
WORD69=-000212-
WORD7 =-000016
                                                                                                         WORD86= 000254
                                                                                                                                            $CB0MG=+жжжжжж
WORD32= 000100
                                   WORD50=-000144
                                                                                                         WORD87= 000256
                                                                                                                                            $COTB -- ****** GX
WORD33= 000102
WORD34= 000104
                                   WORD51=:000146
                                                                                                         WORD88=-000260
                                                                                                                                                     = - жижжижж GX
                                   WORD52= 000150
WORD53= 000152
                                                                      WORD70= 000214
                                                                                                         WORD89= 000262
                                                                                                                                            $MUL
                                                                                                                                                    = · ******** · G$\(\hat{\mathbb{X}}\);
WORD35= 000106
                                                                      WORD71=-000216
WORD72=-000220
WORD73=-000222-
                                                                                                         WORD9 - 000022
                                                                                                                                                     = 007774R/4
                                                                                                                                            $$$
WORD36=-000110
                                   WORD54= 000154
                                                                                                         WORD90= 000264
                                                                                                                                            $$$ARG= 000002
WORD37=-000112
                                   WORD55= 000156
                                                                                                         WORD91=-000266
                                                                                                                                            $$$T1 = 000067
WORD38= 000114
WORD39= 000116
                                   WORD56=-000160
WORD57=-000162
WORD58=-000164
                                                                      WORD74= 000224
                                                                                                         WORD92=-000270
                                                                                                                                            $$$T2 - = - 000027
                                                                      WORD75= 000226
                                                                                                         WORD93=-000272
                                                                                                                                            .FSRCB= ******* G
.GCML1= ******** G
WORD4 = 000010
                                                                      WORD76=-000230
WORD77=-000232-
                                                                                                         WORD94= 000274
WORD40= 000120
                                   WORD59= 000166
                                                                                                         WORD95= 000276
                                                                                                                                            ...PC1= 010320R
WORD41=-000122
WORD42=-000124
                                   WORD6 - 000014
                                                                      WORD78= 000234
                                                                                                                                            ...PC2=-010320R
...PC3=-010320R
                                                                                                         WORD96=-000300
WORD97=-000302
                                   WORD60= 000170
WORD61= 000172
WORD62= 000174
                                                                      WORD79= 000236
WORD43=-000126
                                                                      WORD8 = 000020
WORD80= 000240
                                                                                                         WORD98 = · 000304
                                                                                                                                            ...TPC= 000020
WORD44= 000130
            000000
 . ABS.
                            999
                            001
$$FSR4
            002040
                            002
ERRORS DETECTED:
                          0
VIRTUAL MEMORY-USED: 8170 WORDS- (-32-PAGES)
DYNAMIC-MEMORY: 9140 WORDS- (-35 PAGES)
ELAPSED-TIME: 00:01:42-
IMAIN,TMAIN/-SP=E20,1]IM,E20,1]TMAIN-
```

```
Am to the state of the
    MACRO-M1110 27-MAR-80 15:39 PAGE-5
                                     Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                         .FITLE . FREG
 234567
    000000
                                                         .PSECT
                                                         .LIST
                                                         TERM DETECTOR MANUAL DEBUGGING AIDS!
                                                         REGISTER EXERCISES
 8
                                                         COMMANDS:
                                                                   STORE INTO A TD REGISTER
READ FROM A TD REGISTER
10
1 i
                                                         ONCE A COMMAND HAS BEEN EXECUTED FOR AN ERROR ENCOUNTERED)
THIS MODULE RETURNS CONTROL TO THE MODULE THAIN AT LOCATION
13
14
15
16
17
18
                                                         STORE -
19
                                                         TABLE OF REGISTER MNEMONICS AND ASSOCIATED ROUTINE
20
                                                         ADDRESSES.
21
22
    000000
                                              STITBL::
23
    000000
                  101
                             101
                                                         .ASCII
                                                                                        :FSA · ALMEMORY: ADDRESS · REGISTER
    000002
              000224
                                                         .WORD
                                                                   STA.
25
26
    0000004
                   102
                             101
                                                         .ASCII.
                                                                   ZBAZ
                                                                                         :FSA·B·MEMORY·ADDRESS·REGISTER
    йййййй
               000234
                                                                   STB.
    000010
                             101
                   103
                                                         .ASCII
                                                                    /CA/
                                                                                        \sharp \mathsf{FSA} \cdot \mathsf{C} \cdot \mathsf{MEMORY} \cdot \mathsf{ADDRESS} \cdot \mathsf{REGISTER}
28
    000012
               000244
                                                                   STC
29
    000014
                  111
                             102
                                                         .ASCII
                                                                   ZİBZ
                                                                                        : INPUT BUFFER MEMORY ADDRESS REGISTER
30
    000016
              000276
                                                         .WORD
31
    000020
                  117
                             102
                                                         .ASCII
                                                                                        OUTPUT BUFFER MEMORY ADDRESS REGISTER
                                                                   /0B/
    000022
               0003223
                                                         . MORD
                                                                   STO
33
    000024
                   102
                             124
                                                         .ASCII
                                                                   ZBT.
                                                                                        :BYTE TRANSLATOR MEMORY ADDRESS REGISTER
34
    000026
               000346
                                                         .WORD
                                                                   STBT
35
    000030
              123
000372
                             103
                                                         .ASCII
                                                                                        :SECTOR - COUNTER
    000032
                                                         .WORD
.ASCII
                                                                   STSC
37
    000034
                   103
                             122
                                                                   /CR/
                                                                                        :CONTROL REGISTER
              000416
38
    000036
                                                         .WORD
                                                                   STOR
39
              000010
                                              STILM:
                                                                   <.-ST1TBL>/4
40
41
                                                         READ
42
43
    000040
                                              REITBL::
44
    000040
                   101
                             101
                                                         .ABCII
                                                                   /AA/
                                                                                        \verb|:FSA\cdot A\cdot MEMORY\cdot ADDRESS\cdot REGISTER|
45
    000042
              000526
                                                         .WORD
                                                                   REAA
46
    999944
                  102
                             101
                                                         .ASCII
                                                                   /BA/
                                                                                        :FSA · B · MEMORY · ADDRESS · REGISTER · F
47
    000046
              000542
                                                         .WORD.
                                                                   REBA
48
    000050
                   103
                             101
                                                                   ZCAZ
                                                                                        :FSA·C·MEMORY·ADDRESS:REGISTER·
49
50
    000052
               000556
                                                                   RECA
                                                         .WORD.
    000054
                  111
                             102
                                                         .ASCII
                                                                                        : INPUT BUFFER MEMORY ADDRESS REGISTER
    000056
              000572
                                                         .WORD
                                                                   REIA
52
53
   000060
000062
                             102
                                                         .ASCII
                                                                   Z08Z
                                                                                        :OUTPUT-BUFFER-MEMORY-ADDRESS-REGISTER
              000614
                                                         .WORD
                                                                   REDA
    000064
                             124
                  102
                                                                                        *{\tt BYTE} \cdot {\tt TRANSLATOR} \cdot {\tt MEMORY} \cdot {\overset{\bullet}{\to}} {\tt DDRESC} \langle {\tt REG} / {\tt SJER} \rangle
                                                         ABOIL.
                                                                   /BT/
55
    йййййбб
              0006361
                                                                   RETA
                                                         . WORD
56
    000000
                                    .ASCIII /SC/
.WORD RESC
Approved For Release 2005/07/12
                             103
                  123
                                                                                        :SECTOR · COUNTER ·
              000660
    000072
```

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TREG-

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TREG-
                            10 M1110 27-MAR-80: 15:39 PAGE: 5-1 
                  000074
000076
            58
                                                                   127
                                                                                                                        .ASCII.
                                                                                                                                                                                   :STATUS WORD
            59
                                       0007101
                                                                                                                       .WORD
                                                                                                                                         RESW
           60
                   000100
                                              103
                                                                   122
                                                                                                                       .ASCII
                                                                                                                                           /CR/
                                                                                                                                                                                  CONTROL REGISTER
                   000102
            61
                                       0007024
                                                                                                                        .WORD
           62
                  000104
                                              115
                                                                                                                                                                                  :MISC-SIGNALS
                                                                   123
                                                                                                                        .ASCII
                                                                                                                                            /MS/
           63
64
                                      000716
                  000106
                                                                                                                       .WORD
                                                                                                                                           REMS
                  000110
                                              124
                                                                   122
                                                                                                                       .ASCII-
                                                                                                                                           Z0RZ
                                                                                                                                                                                   :TD-OUTPUT-BUFFER-(TO-QR)
           65
                  000112
                                       000740
                                                                                                                        .WORD
                                                                                                                                           REOR
           66
67
                                       000013
                                                                                                  RE1LN-
            68
69
70
71
72
                                                                                                                      STORE PERFORM SECOND LEVEL PARSING EG. IN THE COMMAND:
            73
74
                                                                                                                      PARSE . THE . 101
                   000114
                                                                                                  ST1::
                  000114
000120
000122
            76
77
                                       004767
                                                           000000G
                                                                                                                                                                                 ;LOCATE-OPERAND-IN COMMAND-LINE-
;OK, CONTINUE-
;'MISSING-OPERAND'
;EXIT-
                                                                                                                       JSR.
                                                                                                                                          PC.FIND.
                                       183883
                                                                                                                      BCC.
                                                                                                                                          1$
            78
                                       004767
                                                           000000G
                                                                                                                       JSR
                                                                                                                                          PC, ERR3
                                                                                                                                         STIX
PC.PACK
2$
PC.ERR4
            79
                  000126
                                       000543
                                                                                                                      BR
            80
                  000130
                                                                                                                                                                                 CONVERT COMMAND LINE VALUE TO BINARY
CONVERSION SUCCESSFUL
INVALID NUMERIC VALUE
                                       884767
                                                           000000G
                                                                                                  1$:
                                                                                                                      JSR-
            81
                   000134
                                       103003
                                                                                                                      BCC.
                                       004767
           82
                  .000136
                                                           000000G
                                                                                                                      JSR .
BR
           83
                  000142
                                      000535
                                                                                                                                          STIX
           84
                                                                                                                                                                                                                              1
            85
                                                                                                                      CONTINUE - PARSING -
           86
87
                                                                                                                      FIND THE REGISTER MNEMONIC IN THE COMMAND LINE
                                                                                                  ż
           88
                  000144
                                      004767
                                                           000000G
                                                                                                                       JSR
                                                                                                                                         PC.FIND
                                                                                                                                                                                  ;LOCATE·REG MNEMONIC·
                  000150
                                       103003
                                                                                                                      BCC.
                                                                                                                                          3$
                                                                                                                                                                                 :OK, CONTINUE:
:'MISSING OPERAND'
           90
91
                  000152
                                      004767
                                                           000000G
                                                                                                                                         PC.ERR3
                                                                                                                      JSR.
                  000156
                                      000527
           92
                                                                                                                     MATCH THE MNEMONIC FROM THE COMPAND INTRACTAGAINST
           93
           94
                                                                                                  ż
                                                                                                                      THE TABLE OF VALID MNEMONICS.
           95
           96
                                      012700
012702
                  000160
                                                           000010
                                                                                                                                         #ST1LN,RØ
#ST1TBL,R2
                                                                                                  3$:
                                                                                                                      MOV-
                                                                                                                                                                                  ; NUMBER · OF · TABLE · ENTRIES
                   000164
                                                          0000000
                                                                                                                      MOV
                                                                                                                                                                                 :POINT TO TABLE :MATCH AGAINST COMMAND LINE :MATCH WAS MADE :
           98
99
                  000170
                                      004767
                                                          000000G
                                                                                                                      JSR.
BCC.
                                                                                                                                         PC,SCAN.
                                      103003
004767
                  000174
                                                                                                                                          4$
                  000176
          100
                                                                                                                                         PC, ERR5
                                                          000000G
                                                                                                                      JSR.
                                                                                                                                                                                 ; 'INVALID REGISTER MNEMONIC:
         101
                                      000515
                                                                                                                      BR
                                                                                                                    102
         103
         104
         105
                                                                                                                     INDICATOR: EG:
>ST.0 CR.L.
LOOP:FLAG.WILL:BE:SET:IF:INDICATOR: IS:PRESENT.
JUMP:TO:ROUTINE:TO:LOAD:REGISTER.
         106
107
          108
         109
         110
         111
                  000204
                                     010167
                                                         000000G
                                                                                                                     MOV.
                                                                                                  4$;
                                                                                                                                          R1.RTHPT
                                                                                                                                                                                 ;SAVE POINTER
;LOOP ON TEST
         112.000210
                                      004767
                                                          000000G
                                                                                                                                         PC,LOOPR
RTNPT,R1
                                                                                                                      JSR
        113 000214
                                     016701
                                                          000000G
                                                                                                 STIN:
                                                                                                                                                                                 ;POINT TO ROUTINE
;JUMP TO ROUTINE
                                                                                                                     MOV.
         114 000220
                                     000171
                                                          000000
                                                                                                                                         @(R1)
                                                                                Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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TREG-
         MACRO-M1110 27-MAR+80 15:39 PAGE-5+2
                                      Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    115
    116
    117
                                                        STORE INTO THE MEMORY ADDRESS REGISTERS FOR THE FSA'S
    118
    119 000224
                  012767
                            000000
                                     000000G STA::
                                                        MOV
                                                                  #T$FSAA,APLACE
                                                                                    :SELECT-FSA-A
    120
        000232
                  000407
                                                        BR
                                                                                    :MOVE SELECTION TO TD
                                                                 STOR
    121
        000234
                  012767
                            000004
                                     000000G·STB::
                                                        MOV.
                                                                  #T$FSAB,APLACE
         000242
                  000403
                                                        BR
                                                                 STOR
    123 000244
                  012767
                            000014
                                     000000G:STC::
                                                        MOY
                                                                 #T$FSAC,APLACE
                                                                                    :SELECT-FSA-C
    124
    125
        000252
                  052767
                            020000
                                     000000G.STOR:
                                                        BIS
                                                                  #T$SCLK,APLACE
                                                                                    :START-CLOCK
    126
        000260
                  016767
                            000000G-176360
                                                                                    :MOVE TO CONTROL REG :MOVE VALUE FROM COMMAND LINE
                                                        MOV:
                                                                 APLACE, TD$CTW.
    127
        000266
                  016767
                            000000G-176362
                                                        MOV-
                                                                 BINWD, TD$TAW
    128
         000274
                  000454
                                                                                    :CHECK · LOOP · FLAG ·
                                                                 STLP
    129
     130
                                                        STORE · INTO · INPUT · BUFFER · MAR
    131
        000276
000304
    132
                  012767
                            000040
                                    176360
                                                        MOV-
                                                                                    :ENABLE · INTERFACE · AND · CONTROL ·
                                                                 #T$ICD,TD$CTW
                  012767
    133
                            000024
                                     176362
                                                        MOV.
                                                                 #T$IBAR, TD$TAW
         000312
    134
                  016767
                            000000G-176364
                                                                 \texttt{BINUD.TD\$TD} \uplus
                                                                                                                        000320
                  000442
                                                                                    ;TEST-LOOP-FLAG
    136
    137
                                                        STORE · INTO · THE · OUTPUT · BUFFER · MAR
    138
    139
        000322
                  012767
                            999949
                                    176360
                                              STO::
                                                        MOV
                                                                 #T$ICD, TD$CTW.
                                                                                    ;ENABLE · INTERFACE · AND · CNTL
;SELECT · OUTPUT · BUFFER ·
    140
        000330
                  012767
                            000032
                                     .176362
                                                        MOV
                                                                 #T$OBWA, TD$TAU
    141
        000336
                  016767
                            000000G-176364
                                                        MOV.
                                                                 BINWD, TD$TDW.
                                                                                    :MOVE · WORD · TO · TRANSFER · REG ·
    142
        000344
                  000430
                                                                 STIP
    143
    144
                                                                                                                -
                                                        STORE INTO THE BYTE TRANSLATOR MAR
    145
                                                                                                                * 5.
                                                                 #T$ICD,TD$CTW
#T$BTAR,TD$TAW
    146
        000346
                  012767
                            000040
                                     176360
                                              STBT::
                                                        MOV
                                                                                    : ENABLE · INTERFACE · AND · CONTROL ·
    147
        000354
000362
                  012767
                            000030
                                     176362
                                                        MOv.
                                                                                    : SELECT BYTE TRANSLATOR
    148
                  016767
                            000000G 176364
                                                                 BINWD, TD$TDW.
                                                                                    :TRANSEER DATA WORD
    149
        000370
                  000416
                                                        BR
                                                                 STLP
    159
    151
                                                        STORE · INTO · THE · SECTOR · COUNTER ·
    152
    153
        000372
                  012767
                           000040 - 176360
                                              STSC::
                                                       MOV:
                                                                                    :ENABLE · INTERFACE · AND · CONTROL
:SELECT · SECTOR · COUNTER ·
                                                                 #T$ICD,TD$CTW
    154
                  012767
016767
        000400
                           0000223
                                    :176362
                                                        MOV.
                                                                 #T$SC, TD$TAW.
BINWD, TD$TDW.
    155
        000406
                           000000G-176364
                                                                                    ;TRANSFER · DATA · WORD
        000414
                  000404
                                                        BR
    157
    158
                                                        STORE INTO THE CONTROL REGISTER
                                                                                                     160
        000416
                  016767
                           000000G:176360
                                              STOR::
                                                       MOV
                                                                 BINWD, TD$CTW
STLP
                                                                                    :MOVE TO CONTROL REG
    161
        000424
                  000400
    162
    163
                           000000G 000000G STLP:
    164 000426
                  032767
                                                        BIT
                                                                 #LOOP,BASE
                                                                                    :LOOP·FLAG·ON
        000434
    165
                 001267
                                                                                    :YES, REPEAT.
    167 000436
                                              STIX:
    168 000436
                 004767
                           000000G
                                                        JSR
                                                                 PC.KILL
                                                                                    :KILL AST_
                                                                                              T (IF THERE WAS DIVE)
    169
        000442
                 000167
                           000000G
                                                        JMP
                                                                 COMXX.
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可以用的时间

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TREG.
                               0 M1110 27-MAR-80 15:39 PAGE 6
                                                                                       5:39 PAGE 6
Approved For Release 2005/07/1 AIA-RDP85-00514R000200020001-3
          172
173
                                                                                                                                 READ
          174
                                                                                                                                PERFORM SECOND LEVEL PARSING
           i75
                                                                                                                                EG. IN THE COMMAND: >RE CR
          176
177
                                                                                                                                 PARSE - THE - 1 CR 1
          178
           179
          180
                   000446
          181
                   000446
                                          004767
                                                                000000G
                                                                                                                                 JSR
                                                                                                                                                     PC.FIND.
                                                                                                                                                                                                 :LOCATE THE REGISTER MNEMONIC
                    000452
                                           103003
                                                                                                                                BCC -
                                                                                                                                                      1$
                                          004767
          183 000454
                                                                                                                                                                                                 : MISSING OPERAND
                                                                000000G:
                                                                                                                                 JSR.
                                                                                                                                                     PC,ERR3
          184 000460
                                          000574
                                                                                                                                BR
                                                                                                                                                     RE1X
          185
          186
                                                                                                                                MATCH: THE: REGISTER: MNEMONIC: FROM THE: COMMAND: LINE
           187
                                                                                                                                 AGAINST A TABLE OF VALID MNEMONICS.
          188
                    000462
           189
                                          012700
                                                                000013
                                                                                                            1$:
                                                                                                                                                                                                :NUMBER OF TABLE ENTRIES
:POINT TO TABLE
:MATCH AGAINST COMMAND LINE
                                                                                                                                                      #RE1LN,R0
                    000466
                                          012702
                                                                0000401
                                                                                                                                MOV-
                                                                                                                                                      #RE1TBL,R2
                                          004767
          191
                    000472.
                                                                000000G
                                                                                                                                JSR-
BCC-
                                                                                                                                                     PC.SCAN-
          192.000476
193.000500
                                          103003
                                                                                                                                                                                                 ; MATCH WAS MADE : INVALID REGISTER MNEMONIC:
                                                                                                                                                      2$
                                          004767
                                                                000000G-
                                                                                                                                 JSR
           i94
                    000504
                                          000562
                                                                                                                                BR
                                                                                                                                                     RE1X
                                                                                                                                                                                                                                               - TE
          195
          196
                                                                                                                                SAVE THE POINTER TO THE ROUTINE ASSOCIATED WI神,THE REGISTER. R1 —> ROUTINE ADDRESS.
CALL ROUTINE TO SCAN THE COMMAND LINE FOR A LOOP
           197
           198
           199
                                                                                                                                 INDICATOR. EG:
          200
                                                                                                                                 >RE · CR · L ·
          201
                                                                                                                                JUMP: TO: ROUTINE: TO: READ: REGISTER.
          202
          283
          204 000506
                                                                                                                                                                                                SAVE ROUTINE POINTER
LOOP ON TEST?
POINT TO ROUTINE
                                          010167
                                                                000000G
                                                                                                           2$:
                                                                                                                                                     R1,RTHPT
          205
                    000512
                                          004767
                                                               000000G
                                                                                                                                 JSR.
                                                                                                                                                     PC.LOOPR
          206
                    000516
                                          016701
                                                                000000G
                                                                                                           REIN:
                                                                                                                                MOV.
                                                                                                                                                     RTHPT,R1
          287
                    000522
                                         000171
                                                                                                                                JMP
                                                                                                                                                                                                 :GO THERE
                                                                                                                                                     @(R1)
          208
          209
         209
210
211
212 000526
213 000526 012767
214 000534 016701
215 000540 000523
216
217
218
219 000542
                                                                                                                                READ FSA · A · MEMORY · ADDRESS · REGISTER
                                                                                                           REAA::
                                                                000000
                                                                                   -176368
                                                                                                                                                     #T$FSAA,TD$CTW
TD$TAR,R1
                                                                                                                                MOV
                                                                                                                                                                                              :SELECT.FSA.A.
                                                                176372
                                                                                                                                MOV-
                                                                                                                                                                                                :GET REG CONTENTS
                                                                                                                                                                                                :PRINT
                                                                                                                                READ FSA B MEMORY ADDRESS REGISTER
                                                                                                           REBA::
                                         012767
016701
                                                                                                                                                     #T$F$AB,TD$CTW: ;SELECT-F$A.B.
TD$TAR,R1: ;GET-REG CONTENTS: ;AND-PRINT: ;AND-
          220
                   000542
                                                                000004 - 176360
                                                                                                                                MOV.
                    000550
                                                                                                                                MOV.
BR
                                                                176372
         222
223
                    000554
                                         000515
         224
                                                                                                                                READ FSA C MEMORY ADDRESS REGISTER
         226 000556
                                                                                       76360 M0V #T$F$AC, TD$CTIJ :$FI FET T$3 0.00 Approved For Release 2005/07/12 : CIA-RD\**85 005/14\**R000200920001-3
                   000556
                                        012767
                                                               000014
                                                                                    176360
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TREG-
         MACRO-M1110 27-MAR-80 15:39 PAGE-6-1
                                       Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    228 - 000564
                   016701
                                                          MOV-
                                                                    TD$TAR,R1
                            176372.1
                                                                                       :GET-REG CONTENTS
    229
230
         000570
                   000507
                                                                    REPUT.
                                                                                       :PRINT
                                                                                                      至 一次 物学
    231
232
                                                          READ INPUT BUFFER MEMORY ADDRESS REGISTER
    233 000572
                                                REIA::
    234 000572
                   012767
                             000040
                                                          MOV
                                                                    #T$ICD, TD$CTW.
                                                                                       #SELECT - INTERFACE - AND -CONTROL-
#SELECT - INPUT - BUF - REG -
#GET - REG - CONTENTS -
    235 000600
                   012767
016701
                             000024
                                      .176362
                                                                    #T$IBAR,TD$TAW
    236
237
         000606
                             176374
                                                          MOV.
                                                                    TD$TDR,R1
         000612-
                   000476
                                                                    REPUT-
                                                                                       :PRINT
    238
     239
                                                          READ OUTPUT BUFFER MEMORY ADDRESS REGISTER
     240
     241
         000614
                                                REOA::
    242.000614
                   012767
                             000040
                                       176360
                                                          MOV.
                                                                    #T$ICD.TD$CTW
                                                                                       SELECT INTERFACE AND CONTROL SELECT OUTPUT BUFFER MAR GET REG CONTENTS
     243
         000622
                   012767
                             000034
                                       176362
                                                          MOV-
                                                                    #T$OBRA, TD$TAW
         000630
     244
                   016701
                             176374
                                                          MOV-
                                                                    TD$TDR,R1
     245
         000634
                   000465
                                                          BR
                                                                    REPUT-
     246
     247
                                                          READ BYTE TRANSLATOR MEMORY ADDRESS REGISTER
     248
     249
         000636
                                                RETA::
     250
                   012767
012767
                                                                                      SELECT INTERFACE AND CONTROL SELECT BYTE TRANSLATOR GET BYTE TRANS MAR PRINT
         000636
                             000040
                                       176360
                                                          MOV-
                                                                    #T$ICD.TD$CTU
     251
         000644
                             000030 - 176362
                                                          MOV:
                                                                    #T$BTAR,TD$TAW
     252
         000652
                   016701
                             176374
                                                          MCV.
                                                                    TD$TDR,R1
     253
         000656
                   000454
                                                                   REPUT-
     254
                                                          READ - SECTOR - COUNTER -
     256
257
         000660
                                                RESC::
     258
         000660
                   012767
                             000040
                                     . 176360
                                                          MOV.
                                                                    #T$ICD, TD$CTW
                                                                                       #SELECT: INTERFACE: AND: CONTROL
#SELECT: SECTOR: COUNTER:
#READ: SECTOR: COUNTER:
     259
         000666
                   012767
                             000022
                                       176362
                                                          MOV-
                                                                    #T$SC, TD$TAW
     260
         000674
                   016701
                             176374
                                                          MOV-
                                                                    TD$TDR,R1
     261
         000700
                   000443
                                                                   REPUT
                                                                                       :AND PRINT
     262
     263
                                                          READ CONTROL REGISTER
    264
265
         000702
                                                RECR::
         000702
     266
                   016701
                             176370
                                                                                       ;LOAD CONTROL REG
                                                          MOV.
                                                                    TD$CTR,R1
         000706
                   000440
                                                          BR
                                                                   REPUT
                                                                                       :PRINT IT
     268
     269
                                                          READ - STATUR - REGISTER -
     270
         000710
                   016701
                                                ŔESW::
                             1763763
                                                          MOV-
                                                                   TD$SW,R1
                                                                                       :LOAD-STATUS-REG
    272 000714 000435
273
                                                          BR REPUT PRINTIT
     274
     275
    276 000716
277 000716
                                                REMS::
    277 000716
278 000724
279 000732
                   012767
                             000040
                                       176360
                                                                                       :SELECT:INTERFACE:AND:CONTROL:LOAD:MISC:REG:
                                                          MOV-
                                                                    #T$ICD.TD$CTU-
                   012767
                             ававаза
                                       176362
                                                          MOV:
                                                                    #T$BTAR,TD$TAW
                   016701
                             176374
                                                          MOV.
                                                                    TD$TDR,R1
                                                                                       :READ · MISC · REG
    280 000736
281
                   800424
                                                                   REPUT.
                                                                                         - maken a state of the time.
    282
                                                          PRINT TD OUTPUT TO OR
    283
    284 000740
                                       Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
```

TREG-O M1110 27-MAR-80 15:39 PAGE 6-2 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 000740 016701 176344 MOV TD\$OAR,R1 ;READ · OUTPUT · AVAILABLE · REG ; IS OUTPUT AVAILABLE ; YES, PRINT ; EMPTY 286 000744 287 000750 032701 100000 #T\$OUTA,R1 BIT 001006 BNE 1\$ 000752 046505: 000000G 288 #"EM.PRINT. 012767 MGV. :EMPIT: :WRITE:MESSAGE: 289 000760 004767 000000G PC,CONSOL RELP JSR. 290 291 000764 000426 :TEST LOOP :POINT TO PRINT LINE BR 291 000766 292 000772 012705 016701 000000G MOV #PRINT, R5 176346 READ OUTPUT MOV: TD\$OTR,R1 000776 004767 000000G PC.UNPK PC.CONSOL RELP JSR. :CONVERT 294 001002 004767 JSR. 000000G :PRINT.IT. :TEST.LOOP. 295 001006 000415 BR 296 297 PRINT-REGISTER-CONTENTS 298 299 001010 001010 032767 000000G - 000000G BIT #ONCE, BASE : CONTENTS - ALREADY - PRINTED - ONCE 301 001016 001011 YES, SKIP SUBSEQUENT PRINTED ONCE
SET FLAG FOR LINE PRINTED
SET UP POINTER TO PRINT LINE
CONVERT
WRITE TO TTO BNE #ONCE,BASE #PRINT,R5 302.001020 052767 000000G - 000000G BIS 303 001026 304 001032 012705 004767 000000G MOV 000000G JSR PC. UNPK 305 001036 000000G **JSR** PC,CONSOL 306 307 001042 032767 000000G-000000G-RELP: ;LOOP·FLAG·ON· ;YES, REPEAT· BIT. #LOOP, BASE 308 001050 001222 BHE REIN 389 310 001052 311 001052 042767 000000G-000000G-BIC-#ONCE,BASE ;CLEAR·LOCAL·FLAG· ;KILL·AST·(IF·THERE·WAS·ONE) 312-001060 313 001064 314 004767 000167 JSR. PC.KILL. 000000G COMXX: 315 000001 .END

```
TREG-
          MACRO M1.10 27-MAR-80 15:39 PAGE 6-3
SYMBOL . TABLE
                                         Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
ALUCKE = · 040000
                              BYTF4 = . 000004
                                                             BYTE91= 000133
                                                                                                   - 999144
                                                                                                                         Q$QL
                                                                                                                                 = 0000043
ALU0E - = - 004000
                              BYTE40= 000050
                                                                                           ONCE = ***** GX
                                                             BYTE92≈ 000134
                                                                                                                         Q$QLA = 0000053
APLACE= · ***** GX
                                                             BYTE93= 000135
                              BYTE41= 000051
                                                                                           PACK -
                                                                                                  = - ******
                                                                                                                         Q$QLB - = - 000054
A01 = 010000
BASE = ********* GX-
                              BYTE42=-000052
                                                             BYTE94= 000136
                                                                                           PLB.
                                                                                                  = 0000010
                                                                                                                          Q$QLR - = - 000001
                              BYTE43=.000053
                                                             BYTE95= 000137
                                                                                           PLC.
                                                                                                  - 888828
                                                                                                                          Q⊈QW
                                                                                                                                = . 000042
BINUD = ****** GX
                              BYTE44= 000054
                                                             BYTE96= 000140
                                                                                           PLD.
                                                                                                  = 0000030
                                                                                                                         ₫$RDCD= 000005
BITVAL= 000000
                              BYTE45 = 000055
                                                             BYTE97=-000141
                                                                                           PLRWR - = 000200
                                                                                                                         Q$RDMD=-000006
BIT0 = 000001
BIT1 = 000002
                              BYTE46= 000056
                                                             BYTE98= 000142
                                                                                           PLR.EN= 000200
                                                                                                                         Q$REBK=-001000
                              BYTE47=:000057
                                                             BYTE99 - 000143
                                                                                           PRINT = ****** GX QR$CR1= 176420
                                                                                                                         Q$RNC -- 006000
Q$RSC -- 004000
BIT10 = 002000
                                                             BYTVAL=:000144
CBKALL=:001000
CBKCLK=:000400
                              BYTE48= 000060
BIT11 = 004000
                              BYTE49= 0000061
                                                                                           QR$CR2=.176422
                                                                                                                         Q$RSET=.
                                                                                                                                   000010
BIT12 - 010000
                              BYTE5 = 000005
                                                                                           QR$LBR= 176424
Q$ATTN= 000100
                                                                                                                         Q$SM
                                                                                                                                    100000
BIT13 = 020000
                                                             CNOBRE= · 100000
COMXX = · ******* GX
                              BYTE50 = 000062
BYTE51 = 000063
                                                                                                                         Q$SP
BIT14 = 040000
                                                                                           Q$BCL·=·000001
                                                                                                                         Q$SP2 -=
                                                                                                                                   000340
                                                             CONSOL = · ****** GX
BIT15 = 100000
                              BYTE52= 000064
                                                                                           Q$CCCP= 000040
Q$CHB = 000400
                                                                                                                         REAA
                                                                                                                                   000526RG
                                                                                                                                                  992
BIT2 - 000004
                              BYTE53= 000065
BYTE54= 000066
                                                             CPCCEN=-010000
                                                                                                                         REBA
                                                                                                                                   000542RG
                                                                                                                                                  002
       = 000010
BIT3
                                                             CPREAD = 040000
                                                                                           Q$CHRL= 000200
                                                                                                                         RECA
                                                                                                                                   000556RG
        = 0000020
                              BYTE55= 000067
                                                             CPURTE = : 020000
                                                                                           Q$CLR·=·000040
Q$CNC·=·030000
Q$CP·=·000060
                                                                                                                         RECR
                                                                                                                                   000702RG
000572RG
                                                                                                                                                  002
        = .000040
                              BYTE56 = 000070
BYTE57 = 000071
BIT5
                                                             CSADRD = . 000004
                                                                                                                         REIA
        = 000100
                                                                                                                                                  โคคิว
BIT6
                                                             CSEQCI = 100000
CSOE - 000040
                                                                                                                                   000516R
001042R
000716RG
                              BYTE58= 000072
        - 000200
                                                                                           Q$CPCC=-000010
Q$CP2-=-000260
Q$CSC-=-010000
                                                                                                                         RELP
                                                                                                                                                  002
       = 000400
= 001000
BIT8
                              BYTE59= 000073
                                                             CSWRTE = . 000100
                                                                                                                         REMS
                                                                                                                                                  002
                              BYTE6 = 000006
: 1T9
                                                             DBR.RD= 000001
                                                                                                                         REDA
                                                                                                                                  000614RG
001010R
       = 000000
BYTER
                              BYTE60= 000074
                                                             DB$CPP= 001457
                                                                                           Q$CSEL = . 000360
                                                                                                                         REPUT:
                                                                                                                                                  002
BYTE1 = 000001
                              BYTE61= 000075
                                                             DB$SPT= 000026
                                                                                           Q$CSET= 0000002
Q$CSP -= 020000
Q$DMA -= 000001
                                                                                                                                   000740RG
                                                                                                                                                  002
BYTE10= 000012
                              BYTE62 = . 000076
                                                             DB$TPC= 000023
                                                                                                                         RESC
                                                                                                                                                  002
BYTE11= 000013
                              BYTE63= 000077
                                                             DISPGS= 100000
                                                                                                                         RESW
                                                                                                                                   000710RG
                                                                                                                                                  002
BYTE12= 000014
                              BYTE64= 000100
                                                             DMAAWR= 000005
                                                                                           Q$ENBK = . 040000
                                                                                                                         RETA
                                                                                                                                   000636RG
                                                                                                                                                  992
                                                                                          Q$ENOR=:020000
Q$ENOR=:020000
Q$FAL:=:004000
Q$FC:=:000045
Q$FO:=:000044
BYTE13=-000015
                              BYTE65= 000101
                                                             DMARRD = . 000003
                                                                                                                         RE 1
                                                                                                                                   000446RG
                                                                                                                                                  992
BYTE14= 000016
                              BYTE66=-000102
                                                             DMARWR = - 000004
                                                                                                                         RE1LH . = .
                                                                                                                                   000013 G
BYTE15= 000017
                              BYTE67= 000103
                                                             ENBR. = 010000
                                                                                                                         RE1TBL -
                                                                                                                                   000040RG
                                                                                                                                                  002
BYTE16=-0000020
                              BYTE68=-000104
                                                             ERR3
                                                                   = · ****** GX ·
                                                                                                                         RE1X
                                                                                                                                   001052R
BYTE17= 000021
                              BYTE69= 000105
                                                                                                                         RGQ.EN= 000200
                                                             FRRA
                                                                    BYTE18= 000022
                              BYTE7 = 000007
                                                             ERR5
                                                                    = · ***** GX
                                                                                           Q$HBF.=.000002
Q$ICP.=.000006
                                                                                                                         RGQ.VA= 020000
                              BYTE70=-000106
BYTE71=-000107
BYTE72=-000110
BYTE19= 000023
BYTE2 = 000002
                                                             FIND.
                                                                   = · ******* GX ·
                                                                                                                         RTNPT -- ***** GX
                                                             KILL.
                                                                    = - жжжжжжж GX -
                                                                                           Q$IHB -- 000003
                                                                                                                                = - ****** GX-
                                                                                                                         SCAN
BYTE20= 000024
                                                             LOC.EN= 000100
                                                                                           Q$IHRL= 000002
                                                                                                                         SEQ.CI= AAAAAA
BYTE21 = - 000025
                              BYTE73= 000111
                                                            LOC.WA= 040000
LOC.WB= 100000
                                                                                           Q$IMRP=-000007
                                                                                                                         STA-
                                                                                                                                   000224RG
                                                                                                                                                  002
002
BYTE22= 000026
                              BYTE74= 000112
                                                                                           Q$LBD -- 001000
Q$LBDP- 001001
                                                                                                                         STB
                                                                                                                                   000234RG
BYTE23= 000027
                                                            BYTE75= 000113
                                                                                                                         STBT
                                                                                                                                   000346RG
                                                                                                                                                  002
BYTE24= · 000030
                              BYTE76= 000114
                                                                                           Q$LBP·=·000001
                                                                                                                         STC
                                                                                                                                   000244RG
                                                                                                                                                  002
BYTE25= 000031
                              BYTE77= 000115
                                                             MAREN1 = 000001
                                                                                           Q$LDCD= 000003
Q$LDMD= 000004
                                                                                                                         STOR
                                                                                                                                   000416RG
                                                                                                                                                  882
                              BYTE78=-000116
BYTE79=-000117
BYTE8 =-000010
BYTE26=-000032
                                                             MAREN2 = . 004000
                                                                                                                                   000276RG
                                                                                                                                                  002
BYTE27= 0000033
                                                             MARLOD = . 010000
                                                                                           Q$LDPP= 002000
                                                                                                                         STIN
                                                                                                                                   000214R
BYTE28= 000034
                                                             MAROUT = : 000002
                                                                                           Q$LHP·=·010000
                                                                                                                         STLP
                                                                                                                                   000426R
                                                                                                                                                  .002
BYTE29= 000035
BYTE3 = 000003
                              BYTE80= 000120
                                                             MAR.LO= 002000
                                                                                           Q$MNC -= 140000
Q$MR -= 000052
                                                                                                                                  _000322RG
                                                                                                                         STO
                                                                                                                                                  1002
                              BYTE81=-000121
                                                             MAR:0U= 000040
                                                                                                                         STOR
                                                                                                                                   000252R
                                                                                                                                                  002
BYTE30= 000036
                              BYTE82= 000122
                                                            MBKALL = 001000
MBKCLK = 000400
                                                                                           Q$MRP - - 000040
                                                                                                                                   000372RG
000114RG
                                                                                                                         STSC
                                                                                                                                                  992
BYTE31=-000037
BYTE32=-000040
                              BYTE03= 000123
                                                                                           Q$MRP2= 000240
Q$MSC = 040000
                                                                                                                         ŠT1
                                                                                                                                                  002-
                              BYTE84= . 000124
                                                             MMADRD = 000100
                                                                                                                         STILN -=
                                                                                                                                   000010 G
BYTE33= 000041
                              BYTE05=:000125
                                                                                           Q$MSET= 000004
Q$MSP = 100000
                                                            MMLEFT= 000002
MMOE = 000004
                                                                                                                         STITEL .
                                                                                                                                   000000RG
                                                                                                                                                  002
BYTE34= 000042
BYTE35= 000043
                              BYTE86= 000126
                                                                                                                                   000436R
                                                                                                                                                  002
                              BYTE87 = . 000127
                                                             MMWRTE = . 000010
                                                                                           0$NCLK= 176000
0$PP - 000100
                                                                                                                         S$CLR
                                                                                                                                   000000
BYTE36= 000044
                              BYTE88= 000130
                                                            MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
                                                                                                                                 TORREST CLASS TORREST
                                         BYTE37=.000045
                              BYTE89= 000131
8YTE38 - . 000046
                              BYTE9 = 900011
                                                                                                                         S$QR
BYTE39 = . 000047
                              BYTE90 = . 000132
                                                                                                                         S$QX
                                                                                                                                 =·000004
```

```
10 M1110 27-MAR-80 15:39 PAGE 6-4
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
SYMBOL TA
S$SR = 0000007
                                 T$IBAR=-000024
                                                                 WORD15= 000036
                                                                                                 WORD44=-000130
                                                                                                                                  WORD73=.000222
S$Si = 00000i0
                                                                 WORD16= 000040
WORD17= 000042
                                 T$18F ⋅ = ⋅ 020000
                                                                                                 WORD45= 000132
                                                                                                                                  WORD74= 000224
WORD75= 000226
                                 T$IBF · = · 040000
S$S2· = 0000014
                                                                                                 WORD46=-000134
TD$CTR=-176370
                                 T$ICD - = -000040
                                                                 WORD18= 000044
                                                                                                 WORD47 = 000136
                                                                                                                                  WORD76=-000230
TD$CTW=-176360
                                 T$MODE=-004000
                                                                 WORD19= 000046
                                                                                                 WORD48= 000140
                                                                                                                                  WORD77= :000232
TD$IHL= 004000
                                 T$0B · = · 000036
                                                                 WORD2 - - 000004
                                                                                                 WORD49= 000142
                                                                                                                                  WORD78= 000234
WORD79= 000236
WORD8 = 000020
TD$MEM= : 000270
                                                                 WORD20=-000050
WORD21=-000052-
WORD22=-000054
                                 T$0BE - = - 004000
                                                                                                  WORD5 = 000012
TD$0AR= 176344
                                 T$0BF·=·010000
                                                                                                  WORD50= 000144
TD$0TR=:176346
                                 T$0BRA= .000034
                                                                                                 WORD51= 000146
WORD52= 000150
WORD53= 000152
                                                                                                                                  WORD80= 000240
TD$QRD=-000274
TD$SW-=-176376
                                 T$08WA= · 000032
T$0UTA= · 100000
T$RBDO= · 000200
                                                                 WORD23= 000056
                                                                                                                                  WORD81= 000242
                                                                 WORD24= 000060
                                                                                                                                  WORD82= 000244
WORD83= 000246
TD$TAR= 176372
                                                                 WORD25 = . 000062
                                                                                                 WORD54= 000154
TD$TAW= 176362
TD$TDR= 176374
                                 T$RNB - = - 000040
                                                                 WORD26=-000064
                                                                                                 WORD55= 000156
WORD56= 000160
                                                                                                                                  WORD84= 000250
                                 T$RSET= 040000
                                                                 WORD27= 000066
                                                                                                                                  WORD85= 000252
WORD86= 000254
WORD87= 000256
TD$TDW=-176364
                                 T$SC: =:000022
                                                                 WORD28= 000070
WORD29= 000072
                                                                                                 WORD57= 000162
T$AD - 000020
T$BA - 000002
                                 T$SCLK= 020000
                                                                                                 WORD58= 000164
WORD59= 000166
WORD6 = 000014
                                 T$SEG1=-000000
                                                                 WORD3 - 000006
                                                                                                                                  WORD88= 000260
WORD89= 000262
WORD9 = 000022
T$BD - - 000010
                                 T$SEG2= : NAMANA1
                                                                 WORD30=-000074
WORD31=-000076
WORD32=-000100
T$BSO -= 100000
T$BT -= 000020
                                 T$SEG3= 000002
                                                                                                 WORD60= 000170
WORD61= 000172
                                 T$SO∙
                                        = 000001
                                                                                                                                  WORD90= 000264
WORD91= 000266 WORD92= 000270
T$BTAR = . 000030
                                 T$UBUS = 100000
                                                                 WORD33=-000102
                                                                                                 WORD62=-000174
T$BTD - = 002000
T$CD - = 000100
T$CLK - = 002000
                                 T$1CLK= 000400
                                                                 WORD34=-000104
                                                                                                 WORD63=-000176
                                 T$8BEN≃∙000020
                                                                 WORD35 - 000106
                                                                                                                                 WORD93 = 000272
WORD94 = 000274
WORD95 = 000276
                                                                                                 WORD64=-000200
WORD65=-000202
                                UBD: IN= 0000020
                                                                 WORD36= 000110
T$DISK= 000200
                                UNPK - ****** GX
                                                                 WORD37=-000112
                                                                                                 WORD66 = . 000204
T$DRD - = 000004
                                 WORD0 = 000000
                                                                 WORD38=-000114
                                                                                                 WORD67 = 000206
                                                                                                                                  WORD96 = 000300
T$EMEM= .010000
                                 WORD1 - 000002
                                                                 WORD39= 000116
                                                                                                 WORD68=-000210
                                                                                                                                  WORD97=-000302
T$FSAA= .000000
                                 WORD10= 000024
                                                                 WORD4 = 000010
                                                                                                 WORD69= 000212
WORD7 = 000016
                                                                                                                                  WORD98 - 000304
T$FSAB= 0000004
                                WORD11= 000026
                                                                 WORD40= 000120
                                                                                                                                  WORD99= 000306:
T$FSAC= 000014
                                WORD12= 000030
                                                                 WORD41= 000122
                                                                                                 WORD70= 000214
                                                                                                                                  WRDVAL = . 000310
T$FSB2=-000010
                                 WORD13= 0000032
                                                                 WORD42= 000124
                                                                                                 WORD71=-000216
                                                                                                                                  XTREAD= 001000
T$IB: =:000026
                                 WORD14= 000034
                                                                 WORD43= 000126
                                                                                                 WORD72=-000220
                                                                                                                                  XTWRTE = . 000400
           000000
. ABS.
                         000
           000000
                          001
TREG
           001070
                         002
ERRORS DETECTED:
                       0
VIRTUAL MEMORY-USED: 3266 WORDS- (-13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:45
TREG, TREG/-SP=[20,1]IM,[20,1]TREG
```

```
TMEM- · · · M
               0 M1110 27-MAR-80 15:37 PAGE 5
Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3
                                                              . WITLE . . WHEM
      1234567890ii
         000000
                                                               PSECT THEM
                                                              .LIST
                                                                        MEB.
                                                              TERM DETECTOR 'MANUAL' DEBUGGING AIDS MEMORY EXERCISES
                                                              COMMANDS:
                                                              LD
PR
                                                                        LOAD MEMORIES.
                                                                        PRINT MEMORY CONTENTS
      13
                                                              ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE TMAIN AT LOCATION COMXX:
      14
15
      16
17
      18
19
                                                              TABLE-OF-VALID-MEMORY-MNEMONICS-AND-THE-ADDRESSES-OF THEIR ASSOCIATED-ROUTINES:
     20
21
22
23
24
25
26
27
         000000
                                                   LD1TBL::
         000000
000002
                                   115
                                                                        ZAMZ
                                                                                             ;FSA·A·
                    0003324
                                                              .WORD
                                                                        LDAM
         000004
                        102
                                   115
                                                              .ASCII.
                                                                        28M2
                                                                                             ;FSA·B
          000006
                    000366
                                                              .WORD
                                                                        LDBM
         000010
000012
000014
                                  115
                                                              .ASCII
                                                                        /CM/
                                                                                             :FSA · C
                    000422
                                                              .WORD
                                                                        LDCM
                        111
                                  102
                                                              .ASCII
                                                                        /IB/
                                                                                             ; INPUT BUFFER
     29
30
31
         000016
                    000456
                                                              .WORD
         000020
000022
                                   102
                                                              .ASCII
                                                                        /0B/
                                                                                             :OUTPUT-BUFFER
                    000654
                                                              .WORD
                                                                        LDOB
     32
33
34
35
36
37
38
39
         000024
                        102
                                  124
                                                              .ASCII
                                                                        /BT/
                                                                                             :BYTE · TRANSLATOR
         000026
                    0011124
                                                              .WORD
                                                                        LDBT
                    000006
                                                   LD1LH
                                                                        <.-LD1TBL>/4
                                                              PRINT.
         000030
000030
                                                   PRITBL::
                        181
                                  115
                                                              .ASCII
                                                                        ZAMZ
                                                                                             ;FSA·A·
      40
         000032
                    001650
                                                              .WORD
                   102
001704
     41
         000034
                                  115
                                                              .ASCII
                                                                        ZBMZ
                                                                                             :FSA·B
     42
         000036
                                                              .WORD
                                                                        PRBM
     43
         000040
                        103
                                  115
                                                              .ASCII
                                                                                             :FSA-C-
     44
         000042
                    001740
                                                                        PRCM
                                                              .WORD
     45
         000044
000046
                        111
                                  102
                                                              .ASCII
                                                                        ZTB2
                                                                                             : INPUT BUFFER
     46
                    001774
                                                              .WORD
                                                                        PRIB
         000050
                        117
                                  102
                                                              .ASCII
                                                                                             ;OUTPUT BUFFER.
     48
         000052
                    002072
                                                                        PROB
                                                              .WORD∙
     49
50
         000054
                        102
                                                              .ASCII.
                                                                        /BT/
                                                                                             ;BYTE · TRANSLATOR
         000056
                    BB221B
                                                              .WORD
                                                                        PRBT
     51
52
53
54
55
56
                    000006
                                                   PR1LH
                                                                        <.-PR1TBL>/4
                                                             LOAD
         000060
                                                   LD1::
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      58
          000060
                     884767
                                000000G···
                                                                                                  ; LOCATE · MEMORY · MNEMONIC · IN · COMMAND · LINE ; OK _{\star} CONTINUE ·
                                                                            PC.FIND
      59
          000064
                     103004
                                                                  BCC
                                                                            1$
                      004767
          000066
                                 000000G
                                                                            PC.ERR3
                                                                                                  ; 'MISSING OPERAND:
                                                                  JSR.
      61
          000072
                     000,167
                                001246
                                                                                                  :EXIT
      62
                                                                                                                                                            63
          000076
                     012700
                                000006
                                                       15
                                                                 MOV.
                                                                            #LD1LN,R0
                                                                                                  : NUMBER · OF · TABLE · ENTRIES
      64
          000102
                     012702
                                                                 MOV-
                                                                            #LD1TBL,R2
                                                                                                  :POINT TO TABLE
      65
66
          000106
                     994767
                                000000G
                                                                  JSR
                                                                            PC, SCAN
                                                                                                  :MATCH-AGAINST-COMMAND-LINE
          000112
                     103004
                                                                 BCC
                                                                            2$
                                                                                                  : MATCH · WAS · MADE
      67
                     004767
          000114
                                000000G
                                                                  JSR
                                                                            PC,ERR6
                                                                                                  : "INVALID - MEMORY - MNEMONIC!
      68
          000120
                     000167
                                001220
                                                                  JMP
                                                                            LDIX
      69
71
72
73
74
75
77
79
                                                                  SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC
                                                                  SCAN. THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
                                                                     START ADDRESS ONLY, REPEAT PROMPT FOR EACH MEMORY LOCATION FROM THE START ADDRESS FORWARD, NB. END OF MEMORY (AS DETECTED BY THE OMAIN SUBROUTINE PDATA) OR A <CR> RESPONSE TO THE PROMPT.
                                                                      WILL TERMINATE THE LOAD.
                                                                      >LD.OB.0
                                                                     START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF THIS ONE MEMORY LOCATION ONLY.
      80
                                                                      >LD-OB-01.
      81
82
                                                                     START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE PROMPT AND FILL MEMORY (BETWEEN START AND END ADDRESSES)
                                                                      WITH THIS VALUE.
      84
                                                                      >LD-08-0 6
      85
                                                                     START ADDRESS, END ADDRESS, LOOP INDICATOR; ISSUE ONLY ONE PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START AND END ADDRESSES) WITH THIS VALUE.
      86
      87
                                                                      >LD-08-0 6 L-
      89
      90
      91
          000124
                     010167
                                000000G
                                                      2$:
                                                                 MOV-
                                                                            R1.RTHPT
                                                                                                  :SAVE POINTER
      92
           000130
                     004767
                                 000000G
                                                                 JSR
                                                                            PC.FIND.
3$
                                                                                                  LOCATE START ADDR IN COMMAND LINE
      93
          000134
                      103004
                                                                 BCC
                                                                                                  :OK, CONTINUE
      94
          000136
                     004767
                                000000G
                                                                  JSR
                                                                            PC,ERR3
                                                                                                   'MISSING OPERAND'
      95
           000142
                                001176
                     000167
                                                                 JMP.
                                                                            LD1X
      96
97
          000146
                     004767
                                000000G
                                                      3$:
                                                                 JSR
                                                                            PC.PACK
                                                                                                  CONVERT COMMAND LINE VALUE TO BINARY
          000152
                     103004
                                                                 BCC
                                                                            4$
                                                                                                  :CONVERSION SUCCESSFUL
      98
          000154
                                000000G
                     004767
                                                                 JSR
                                                                            PC,ERR4
                                                                                                    'INVALID-NUMERIC-VALUE'
      99
                     000167
          000160
                                001160
                                                                 JMP
                                                                            LD1X
     100
                     016767
016767
     101
          000164
                                000000G 000000G 4$:
                                                                 MOV.
                                                                                                  :SAVE LOADING START ADDRESS :SAVE IT TWICE (FOR REFRESH ON LOOP)
                                                                            BIHWD, MSTRT.
     102
          000172
                                000000G - 000000G -
                                                                 MOV.
                                                                            BINWD, MSTR2
                     012767
          000200
                                           000000G
                                                                                                  : INIT · END · ADDRESS ·
                                 177777
                                                                 MOV
                                                                            #-1.MEND
     104
                                                                 START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE). IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION
     105
     106
                                                                                                                           IF THERE
     107
     108
                                                                  1 IS IN EFFECT.
     109
     110
          000206
                     004767
                                000000G
                                                                 JSP
                                                                            PC.FIND
                                                                                                  :SCAN - COMMAND - LINE
     111
          000212
                     103004
                                                                 BCC
                                                                            5$
                                                                                                  :SOMETHING THE :SIGNAL TO REPEAT PROMP
                                                                                                                                                      $27度例为第二分
     112-000214
                     052767
                                999999G - 999999G
                                                                            #RP,BASE
     113
          000222
                     000437
                                                                 BR
                                                                            9$
                                                                                                  ; JUMP TO RTH
     114
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    115 000224
                             000114
                   122711
                                                          CMPB.
                                                                    #1L,(R1)
                                                                                       :LOOP · INDICATOR
                                                                                       :NO. MUST BE UPPER ADDRESS:
:LOWER ADDRESS BECOMES UPPER ADDRESS
                                                                   6$
MSTRT,MEND
    116 000230
                   001006
                                                          BNE.
     117
         000232
                             000000G-000000G
                   016767
                                                          MOV
         000240
                   004767
                             000000G
                                                          JSR -
                                                                   PC HANG
                                                                                       :HOW.TO.STOP.LOOP.
    119
         000244
                   000426
                                                                                       :JUMP TO RTH
                                                                   9$
    120
    121 000246
                   004767
                            000000G
                                                                                       ;CONVERT UPPER ADDRESS
                                                          JSR.
                                                                   PC*PACK+
    122-000252-
                   103004
                                                          BCC:
                                                                   7$
                                                                                       :OK, CONTINUE
                   004767
     123
         000254
                             000000G
                                                          JSR.
                                                                   PC.ERR4
                                                                                       ; "INVALID NUMERIC VALUE"
    124 000260
                   000167
                             001060
                                                                   LD4X
                                                                                       ; AND · EXIT
                                                          SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICAOR-AFTER-END-ADDR-(CONDITION-4).
    127
    128
         000264
                   016767
                             000000G.000000G.7$:
                                                                   BINWD, MEND.
                                                                                      :SET.UP.ENDING.ADDRESS.
:CHECK.FOR.LOOP.INDICATOR
                                                          MOV:
     139
         000272
                   004767
                             000000G
                                                          JSR -
                                                                   PC.FIND.
     131
         999276
                   103411
                                                         BCS -
                                                                   9$
                                                                                      :NO-LOOP
     132
         000300
                   122711
                             000114
                                                          CMPB
                                                                   #*L,(R1)
                                                                                      CORRECT INDICATOR
YES, CONTINUE
NO, PUT OUT MESSAGE
     133
         000304
                   001404
                                                         BEQ.
                                                                   8$
    134 000306
                   004767
                             000000G -
                                                                   PC.ERR1
                                                          JSR-
    135
         000312
                   000167
                             001026
                                                                   LDIX
                                                                                      :AND·EXIT·
:HOW·TO·STOP·LOOP·
         000316
                   004767
                             000000G
                                                8$:
                                                          JSR
                                                                   PC. HANG
    138 000322 016701
                            000000G
                                                9$:
                                                         MOV-
                                                                   RTHPT,R1
                                                                                      ; POINT TO ROUTINE
     139
         000326 000171
                            000000
                                                          JMP.
                                                                                      :JUMP TO ROUTINE
                                                                   @(R1)
     140
    141
    142
                                                         LOAD ESA A
     143
     144
         000332
                                                LDAM::
     145
         000332
                   012767
                            000000
                                     -000000G
                                                         MOV
                                                                   #T$FSAA,APLACE
                                                                                      :SELECT:FSA:A:FOR:SUBRTN:
                  016746
016746
    146
         000346
                            000000G
                                                         MOV-
                                                                   AHIGH,-(SP)
ALOW,-(SP)
                                                                                      ;UPPER · MEMORY · LIMIT ·
    147
         000344
                            000000G
                                                         MOV.
                                                                                      :LOWER LIMIT
     148
         000350
                   004767
                            000000G
                                                          JSR
                                                                   PC.BUFFSA.
                                                                                      :CHECK-ADDRESS-LIMITS, ETC-
     149 000354
                   103402
                                                         BCS
                                                                   1$
                                                                                      :FAILED - CHECK -
    150
        000356
                   004767
                            600000G
                                                                   PC, LDCNTL
                                                         JSR.
                                                                                      :LOAD FSA
    151 000362
                   000167
                            000756
                                                1$:
                                                         JMP
                                                                   LD1X
                                                                                      :AND EXIT
    152
                                                         LOAD FSA B
    154
    155
        000366
                                               LDBM::
                  012767
016746
    156
        000366
                            000004 000000G
                                                                   #T$FSAB,APLACE
BHIGH,-(SP)
BLOW,-(SP)
                                                         MOV
                                                                                      :SELECT.FSA.B.FOR.SUBRTN.
         000374
    157
                            000000G
                                                         MOV
                                                                                      :UPPER·MEMORY·LIMIT·
:LOWER·LIMIT·
         000400
                   016746
                            000000G
                                                         MOV:
    159
        000404
                   004767
                            000000G
                                                         JSR.
                                                                   PC, BUFFSA
                                                                                      :CHECK ADDRESS LIMITS, ETC.
        000410
    160
                   103402
                                                         BCS
                                                                   1$
                                                                                      ;FAILED CHECK
        000412
    161
                  004767
                            авававь.
                                                          JSR.
                                                                   PC.LDCNTL
                                                                                      :LOAD FSA
    162-000416
                   000167
                            000722. :
                                                1$:
                                                         JMP.
                                                                   LD4X
                                                                                      :AND EXIT
    163
    164
                                                         LOAD FSA C
    165
    166 000422
                                               LDCM::
                                                                                      :SELECT FSA C FOR SUBRIME
MOVE UPPER MEMORY LIMIT
:LOWER LIMIT
:CHECK ADDRESS LIMITS, ETC
:FAILED.CHECK
    167
        000422
                  012767
                            000014 000000G
                                                                   #T$FSAC,APLACE
CHIGH,-(SP)
CLOW,-(SP)
                                                         MOV-
        000430
    168
                  016746
                            000000G
                                                         MOV.
                  016746
                            000000G
                                                         MOV.
    170 000440
                  004767
                            000000G
                                                                   PC,BUFFSA.
                                                         JSR.
    171 000444
                  103402
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172.000446 004767
                       000000G:
                                                    JSR -
                                                             PC.LDCNTL.
                                                                                :LOAD · FSA ·
173
                                                                                ; AND EXIT
    000452 000167
                       0006661
                                                             LD4X
175
176
177
                                                    LOAD · INPUT · BUFFER ·
179
    000456
                                          LDIB::
                                                             #T$DISK,APLACE
IHIGH,-(SP)
ILOW,-(SP)
                                                                                SIMULATE DISK
SUPPLY UPPER MEMORY LIMIT S
LOWER LIMIT
180
    000456
              012767
                       000200: :000000G
                                                    MOV
                                                                                                                       78.5 M
     000464
              016746
                        000000G
181
                                                    MOV
182
    000470
              016746
                        000000G
                                                                                :LOWER LIMIT
:PREPARE TO LOAD
183 000474
              004767
                        000000G
                                                    JSR.
                                                             PC.BUFS2
                                                                                 HO ERBORS - CONTINUE
184
    000500
              103002
                                                    BCC
                                                              100$
185
    000502
              000167
                       000636
                                                    JMP
                                                             LD4X
186
187
    000506
              032767
                       000000G-000000G-100$:
                                                              #RP,BASE.
                                                                                 :REPEAT.PROMPT.?.
                                                                                ;NO, ONCE:ONLY:
;READ:DATA:FROM:COMMAND:LINE
;NOT:END OF:MEMORY
;IF:END:OR:ERROR; EXIT:
188
    000514
              001420
                                                    BEQ.
                                                              2$
                                                             PC.PDATA
     000516
189
              004767
                        000000G
                                                    JSR
               103002
190
     000522
                                                    BCC
                                                              10$
                                                             LDIX
191
    000524
              000167
                        000614
                                                    JMP
192
     000530
                                                                                ::<CR> RESPONSE TO PROMPT:
:YES, EXIT:
:LOAD IB ADDRESS
              102002
                                           10$:
                                                    BVC
                                                              28$
     000532
              000167
                                                    JMP
                        000606
                                                              LD4X
194
    000536
              016702
                        000000G ·
                                                              MSTR2,R2
                                                    MOV:
195
    000542
              016712
                        000000G-
                                                    MOV.
                                                              DATA1,(R2)
                                                                                 :LOAD
196
     000546
                        000000G - 000000G
              066767
                                                                                 : ADVANCE ADDRESS
                                                    ADD.
                                                              INCVAL, MSTR2.
     000554
                                                                                 :REPEAT
198
                                                    PROMPT ONCE THEN FILL MEMORY
199
                                                                                           🛎 🚁 💯
200
201
     000556
              004767
                        000000G
                                                    JSR
                                                              PC.PDATA
                                                                                 :PROMPT-ONCE-
202-000562
               103002
                                                              30$
                                                                                 ; NOT END OF MEMORY OR ERROR
                                                                                :IF.YES, EXIT:
:<CR> RESPONSE:TO:PROMPT:
;YES, MISSING:OPERAND:
293
     000564
              000167
                        000554
                                                    JMP
                                                              LD4X
204 000570
                                                    BVC
JSR
               102004
                                           30$:
                                                              40$
                                                              PC,ERR3
     000572
              004767
                        000000G
206
     000576
              000167
                        000542
                                                              LDIX
297
     000602
              016702
                        ининия по
                                                    MOV
                                                              MSTR2,R2
                                                                                 :LOAD IB ADDRESS
                                                                                :ADVANCE ADDRESS.
:HAS UPPER MEMORY LIMIT BEEN REACHED:
:NO. CONTINUE
208 000606
              016712
                        имимима.
                                                    MOV
                                                              DATA1.(R2)
     000612
209
                        000000G · 000000G ·
              066767
                                                              INCVAL, MSTR2
                                                    ADD:
                                                              MSTR2, MEND
210
     000620
              026767
                        000000G - 000000G -
                                                    CMP
     000626
               101765
                                                    BLOS
                                                              40$
212-000630
               032767
                        000000G-000000G
                                                    BIT-
                                                              #LOOP,BASE
                                                                                 : REPEAT COMMAND
213 000636
               991992
                                                                                 :YES, CONTINUE :ELSE EXIT
                                                    BNF
                                                              504
214 000640
              000167
                        000500
                                                     JMP
                                                              LD4X
215 000644
216 000652
              016767
                        000000G-000000G-50$:
                                                              MSTRT, MSTR2
                                                                                 :REINITIALIZE - ADDRESS -
     000652 - 000753
                                                              40$
217
218
219
                                                    LOAD OUTPUT BUFFER
220
221
     000654
     000654
                                                                                 :SET - INTERFACE - AND CONTROL - FOR - SUBRTN -
               012767
                        000040
                                 000000G
                                                              #T$ICD, APLACE
                                                              OHIGH,-(SP)
OLOW,-(SP)
PC,BUFS2
     000662
000666
              016746
016746
                        000000G
                                                    MOV-
                                                                                 ; SUPPLY-UPPER-MEMORY-LIMIT-
223
                                                                                224
     000672·
225
              004767
                        000000G
                                                     JSR.
226
227
228
                                                              100$
              103002
                                                    BCC
     000700
              000167
                        000440
                                                              LD4X
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TMEM- · · · P
              0.M1110 27-MAR-80 15:37 PAGE.5-4
                                          Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
    229 000704
230 000712
                    332767
                               000000G-000000G-100$:
                                                              BIT
                                                                        #RP.BASE
                                                                                              :REPEAT-PROMPT-?-
                                                                                             NO. ONCE ONLY
READ DATA FROM COMMAND LINE
NOT END OF MEMORY
IF FND OF EDDOOR
                    001430
                                                              BEQ
     231
          000714
                    004767
                               000000G
                                                                        PC.PDATA
                                                              JSR
          000720
                     103002
                                                              RCC
                                                                         10$
                                                                                             : IF END OR ERROR, EXIT
     233
          000722
                    000167
                               000416
                                                              JMP
                                                                        LD4X
         000726
000730
     234
                     102002
                                                    10$:
                                                              BVC
                                                                        20$
                                                                                              :<CR> :RESPONSE TO PROMPT
     235
                    000167
                               000410
                                                              JMP
                                                                                              :YES, EXIT
     236
          000734
                    012767
                               000032
                                         176362
                                                   20$:
                                                              MOV
                                                                        #T$OBWA,TD$TAW
          000742
                     016767
                               000000G/176364
                                                              MOV
                                                                        MSTR2,TD$TDW
#T$OB,TD$TAW
     238
          000756
                    012767
016767
                               000036
                                         176362
                                                              MOV
          000756
     239
                               8888898 176364
                                                              MOV
                                                                        DATA1.TD$TDW
         000764
000772
                    066767
000750
                               000000G 000000G
     240
                                                              ADD
                                                                        INCVAL, MSTR2
                                                                                              :ADVANCE ADDRESS
     241
                                                                                              :REPEAT.
     242
     243
                                                              PROMPT ONCE THEM FILL MEMORY.
     244
     245
          000774
                    004767
                                                                                             PROMPT ONCE:
:NOT END OF MEMORY OR ERROR:
:IF YES, EXIT:
                               000000G
                                                    2$:
                                                                        PC, PDATA.
     246
          001000
                     103002
                                                              BCC
JMP
                                                                        30$
     247
          001002
                     000167
                               000336
                                                                        LD4X
     248
          001006
                     102004
                                                                                             ;<CR> RESPONSE TO PROMPT ?
;YES, MISSING OPERAND
                                                                        40$
          001010
                     004767
                               000000G
                                                              JSR
                                                                        PC,ERR3
     250
251
          001014
                     000167
                               000324
                                                              .TMP
                                                                        LD4X
                    012767
016767
          001020
                               000032
                                                                        #T$OBWA,TD$TAW
MSTR2,TD$TDW
#T$OB,TD$TAW
                                          176362 -
                                                              MOV
          001026
                               000000G · 176364
                                                              MOV-
     253
          001034
                    012767
                               000036
                                         176362
                                                              MOV
     254
          001042
                    016767
                               000000G-176364
                                                              MOV
                                                                        DATA1.⊤D$TDW
     255
                    066767
          001050
                               000000G · 000000G
                                                              ADD
                                                                        INCVAL, MSTR2
MSTR2, MEND
                                                                                             :ADVANCE ADDRESS
     256
          001056
                    926767
                               000000G · 000000G
                                                              CMP
                                                                                             :HAS-UPPER-MEMORY-LIMIT-BEEN REACHED:
          001064
                     101755
                                                              BLOS
                                                                                             :NO. CONTINUE.
     258
                               000000G-000000G
          001066
                     032767
                                                              BIT
                                                                        #LOOP, BASE
                                                                                             : REPEAT COMMAND
     259
          001074
                     001002
                                                                                             ;YES, CONTINUE:
                                                              RNF
                                                                        50$
          001076
     269
                    000167
                               000242
                                                              JMP
                                                                        LD4X
     261
                    016767
000743
         001102
                               000000G 000000G 50$:
                                                              MOV.
                                                                        MSTRT, MSTR2
                                                                                             :REINITIALIZE - ADDRESS
     262.001110
     264
     265
                                                              LOAD BYTE TRANSLATOR
     266
          001112
                                                   LDBT::
                               000040 - 000000G
     268
          001112
                    012767
                                                              MOV
                                                                        #T$ICD,APLACE
THIGH,-(SP)
TLOW,-(SP)
                                                                                             SET INTERFACE AND CONTROL
SUPPLY MEMORY UPPER LIMIT,
LOWER LIMIT
                                                                                                                                FOR SUBRTH
                    016746
016746
     269
          001120
                               000000G
                                                              MOV
          001124
                               000000G
                                                              MOV:
     271
          001130
                    004767
                               000000G
                                                              JSR.
                                                                        PC,BUFSET
                                                                                              PREPARE FOR LOAD,
     272.001134
                     103503
                                                              BCS
                                                                        LD4X
                                                                                              :ERROR
                                                                                             :REPEAT PROMPT?
:NO. PROMPT ONLY ONCE
:READ DATA FROM COMMAND LINE
:VALID DATA PRESENT
:IF END OF MEMORY OR ERROR EXIT
:<CR> RESPONSE TO PROMPT
:YES, EXIT
     274
          001136
                    032767
                               000000G-000000G-
                                                              BIT.
                                                                        #RP,BASE.
     275
          001144
                    001430
                                                              BED
                                                                        2$
         001146
001152
     276
                    004767
                               000000G
                                                              JSR
                                                                        PC.PDATA
                     103002
                                                              BCC
                                                                        10$
     278
          001154
                    000167
                               000164
                                                              JMP.
                                                                        LD4\times
         001160
001162
                    102002
000167
     279
                                                              BVC
                                                                        20$
     280
                               000156
                                                              JMP
     281
         001166
                    012767
                               000030
                                         176362
                                                   20$:
                                                              MOM
                                                                        #T$BTAR, TD$TAW
                                                                                             :SELECT BYTE TRANS REG
                                                                        MSTR2,TD$TDW
#T$BT,TD$TAW
    282 - 001174
                    016767
                              000000G·176364
                                                              MOV
                                                                                             #MOVE ADDR TO TRANSFER REG
#SELECT BYTE TRANS MEMORY
#LOAD BYTE TRANS
    283 001202
                    012767
                              000020
                                        1176362
                                                              MOV
     284 001210
                    016767
                              000000G · 176364
                                                              MOV.
                                                                        DATA1.TD$TDW
    285 001216
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R00020002001-3
                    066767
                              000000G · 000000G
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286 001224	000750	ŧ		BR	1\$;REPEAT.			
287			;	PROMPT ONCE THEN FILL MEMORY					
288 289			;	1101111	01100 111011 1 1 1		. 45° ‴₹.		
203 290 001226	004767	000000G	2\$:	JSR·	PC,PDATA	:PROMPT:ONCE:	7 77 1		
291 001232	103002			BCC.	30\$;NOT END OF MEMORY OR ERROR : ;IF YES, EXIT:	: 4		
292.001234	000167	000104		JMP ·	LD1X	: <cr> RESPONSE TO PROMPT ?</cr>			
293 001240	102004		30\$:	BVC. JSR.	40\$ PC.ERR3	:YES, MISSING OPERAND			
294 001242	004767	000000G·		JMP.	LDIX	, 120, 11100111a or civila			
295 001246	000167	000072 000030 176372	40\$:	MOV.	#T\$BTAR,TD\$TAR	;SELECT.BYTE.TRANS REG.			
296 001252 297 001260	012767 016767	000000G 176364	404	MOV.	MSTR2,TD\$TDW	; MOVE · ADDR · TO · TRANSFER · REG ·			
298 001266	012767	000020 176362		MOV.	#T\$BT,TD\$TAW∙	:SELECT BYTE TRANS MEMORY			
299 001274	016767	000000G 176364		MOV.	DATA1.TD\$TDW	:LOAD BYTE TRANS			
300 001302	066767	000000G · 000000G		ADD ·	INCVAL, MSTR2	;ADVANCE ADDRESS: ;HAS:UPPER:MEMORY:LIMIT:BEEN REA	CHED.		
301 001310	026767	000000G -000000G	•	CMP.	MSTR2, MEND	:NO. CONTINUE	ICHED.		
302.001316	101755			BLOS BIT	40\$ #LOOP,BASE	:REPEAT COMMAND			
303 001320	032767	000000G - 000000G	•	BNE -	50\$:YES, CONTINUE			
304 001326 305 001330	001002 000167	000010		JMP ·	LDIX	;ELSE·EXIT·	in the second se		
306 001334	016767	000000G 000000G	·50\$:	MOV.	MSTRT, MSTR2	:REINITIALIZE ADDRESS	5		
307 001342		0000002		BR	40\$				
308	000		;			,			
309									
310 001344			LD1X:	5.70	"DD DACE	.:CLEAR · PROMPT · FLAG			
311 001344	042767	000000G 000000G	i •	BIC	#RP.BASE PC.KILL	;KILL.AST.(IF.THERE.WAS.ONE)	77 J		
312-001352		000000G		JSR.	COMXX	MICE HOLDER MICKE, MICKED			
313 001356	000167	000000G		.JMP ·	COUNTY.				

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TMEM-
                                             Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     315
316
317
318
                                                                  PERFROM SECOND LEVEL PARSING
     320
                                                                  EG. IN THE COMMAND: 
>PR 08 0
     321
                                                                  PARSE THE 10B1
     323
324
     325
          001362
                                                       PR1::
          001362
                     004767
                                000000G
                                                                  JSR.
                                                                             PC.FIND
     327 001366
                                                                                                   ;LOCATE MEMORY MNEMONIC IN COMMAND LINE
                      103004
                                                                  BCC
                                                                             1$
                                                                                                   :OK, CONTINUE
     328-001370
                     004767
                                 000000G -
                                                                  JSR
                                                                             PC, ERR3
    329 001374
330
                                                                                                   ; 'MISSING OPERAND!
                     000167
                                 000726
                                                                  JMP
                                                                             PRIX
                                                                                                   :EXIT-
                                                                                                                                                    Tá
     331
                                                                  SCAN-THE-TABLE-OF-VALID-MEMORY-MNEMONICS-AND-ASSOCIATED
    332
333
                                                                  ROUTINE ADDRESSES.
     334 001400
                     012700
                                                       15:
                                                                  MOV
                                                                                                   ; NUMBER: OF: TABLE: ENTRIES:
; POINT: TO: TABLE:
; MATCH: AGAINST: COMMAND: LINE
; MATCH: WAS: MADE:
                                                                             #PRILN.R0
     335
         001404
                     012702
                                0000301
                                                                  MOV.
                                                                             #PR1TBL,R2
          001410
                     004767
                                000000G
                                                                  JSR.
                                                                             PC,SCAN
    337 001414
                     103004
                                                                             2$
    338
         001416
                     004767
                                000000G
                                                                  JSR.
                                                                             PC.ERR6
                                                                                                   : "INVALID MEMORY MNEMONIC"
     339
         001422 000167
                                                                  JMP.
                                                                             PR4X
    340
    341
                                                                 SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY WEMORIES
    342
                                                                 SAVE PUTNIER TO ROUTINE ASSOCIATED WITH THE MEMORY NEMORIC:
SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:

START ADDRESS ONLY, PRINT ONLY ONE PENDRY LOCATION:
>PROB-0
     343
    344
    345
    346
                                                                     START ADDRESS, LOOP INDICATOR, LOOP ON THE READING OF THIS ONE MEMORY LOCATION ONLY. PRINT THE CONTENTS ONLY.
    347
    348
    349
                                                                      >PR:OB:0 L
    350
                                                                     START-ADDRESS, END-ADDRESS, NO-LOOP, PRINT-THE-CONTENTS-
MEMORY-BETWEEN-THE-START-ADDRESS-AND-THE-END-ADDRESS.
    351
352
                                                                      >PR · 0B · 0 6
    353
                                                                     START ADDRESS, END ADDRESS, LOOP INDICATOR, READ THE CONTENTS OF MEMORY BETWEEN THE START AND END ADDRESSES, HOWEVER, PRINT ONLY THE CONTENTS OF MEMORY AT THE START ADDRESS.
    354
    355
    356
                                                                     >PR-08-0 6 L-
    357
    359 001426
                    010167
                                ийийийи
                                                      2$:
                                                                 MOV
                                                                            R1.RTNPT.
                                                                                                  :SAVE - POINTER
    360 001432
                    004767
                                000000G
                                                                 JSR
                                                                            PC.FIND
                                                                                                  ;LOCATE START ADDR IN COMMAND LINE:
:OK, CONTINUE:
:'MISSING OPERAND:
    361
         001436
                     103004
                                                                 BCC
                                                                            3$
    362
         001440
                    004767
                                000000G
                                                                            PC,ERR3
PR1X
                                                                 JSR
    363 001444
                    000167
                                000656
                                                                 JMP
    364 001450
                    004767
                                000000G
                                                                                                  CONVERT COMMAND LINE VALUE TO BINARY CONVERSION SUCCESSFUL INVALID NUMERIC VALUE:
                                                      3$:
                                                                 JSR
                                                                            PC, PACK
    365 001454
                    103004
                                                                 BCC
                                                                            4$
    366
         001456
                    884767
                               000000G
                                                                 JSR
                                                                            PC,ERR4
    367
         001462
                    000167
                               000640
                                                                 JMP
                                                                            PR1X
    368
         001466
   369
                    016767
                               000000G-000000G-4$:
                                                                 MOV.
                                                                                                  :SAVE LOADING START ADDRESS:
:SAVE IT TWICE
:INIT END ADDRESS
                                                                            BIHWD, MSTRT
    370
         001474
                    016767
                               000000G:000000G
                                                                 MOV-
                                                                            BINWD, MSTR2.
                   012767
   371 001502
                               177777
                                          -000000G
                                                                 M0+4-
                                                                            #-1,MEND.
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TMEM-----MACRO-rii 110 27-MAR-80 15:37 . PAGE: 6-1 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     372
373
                                                             START ADDRESS HAS BEEN FOUND: SCAN-FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE). IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS
     374
     375
     376
                                                              IN EFFECT.
         001510
001514
     378
                    004767
                              000000G
                                                             JSR
                                                                       PC.FIND.
                                                                                            :SCAN · COMMAND · LINE
     379
                    103004
                                                             BCC
                                                                        5$
                                                                                            :SOMETHING THERE
         001516
                    016767
                              000000G - 000000G
                                                                        MSTRT, MEND.
                                                                                            :SET.END ADDR = START ADDR
:JUMP.TO RTN
     381
         001524
                    000445
                                                             BR
     382
     383
         001526
                    122711
                              000114
                                                             GMPB
                                                                        #fL,(R1)
                                                                                            :LOOP · INDICATOR
     384
         001532
                    001011
                                                             BHE
                                                                                            ;NO, MUST-BE-UPPER ADDRESS;SET-FLAG-FOR OUTPUT-CONTROL;LOWER-ADDRESS BECOMES UPPER ADDRESS;HOW-TO-STOP-LOOP;JUMP-TO-RTN
                                                                        6$
     385 001534
                    052767
                              000000G 000000G
                                                             BIS
                                                                        #OUT,BASE
                    016767
004767
     386
         001542
                              000000G 000000G
                                                             MOV:
                                                                       MSTRT, MEND
     387
          001550
                              000000G
                                                             JSR
                                                                       PC.HANG.
         001554
                    000431
                                                                        9$
     389
         001556
     390
                    004767
                              000000G
                                                             JSR
                                                   6$:
                                                                       PC.PACK
                                                                                            CONVERT UPPER ADDRESS
     39 i
         001562
                    103004
                                                             BCC
                                                                                            OK, CONTINUE:

'INVALID' HUMERIC' VALUE'
                                                                        7$
     392
         001564
                    004767
                              000000G
                                                             JSR
                                                                       PC, ERR4
     393
         001570
                    000167
                               177550
                                                             .IMP
                                                                       LD4X
                                                                                            : AND . EXIT.
     394
                                                             SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION-4).
    396
397
     398
         001574
                    016767
                              000000G 000000G 7$:
                                                             MOV
                                                                                            :SET-UP-ENDING-ADDRESS-
:CHECK-FOR-LOOP-INDICATOR
                                                                       BIHWD, MEND.
     399
         001602
                    004767
                              000000G:
                                                             JSR
                                                                       PC.FIND.
     400
         001606
                    103414
                                                             803
                                                                                            : NO - LOOP
    401
         001610
                    122711
                              000114
                                                                                            CORRECT LOOP INDICATOR
YES, CONTINUE
                                                             CMPB
                                                                       #*Lx(R1)
    402
         001614
                    001404
                                                             BEO.
                                                                       8$
     403
         001616
                    884767
                              000000G
                                                             JSR
                                                                       PC, ERR1
    404 001622
                    000167
                              000500
                                                             JMP
                                                                       PR1X
                                                                                            :EXIT
                    052767
    495
         001626
                              000000G:000000G:8$:
                                                                                            SET-OUTPUT-CONTROL
;HOW-TO-STOP-LOOP-
                                                             BIS.
                                                                        #OUT,BASE
    486
         001634
                    004767
                              000000G
                                                             JSR.
                                                                       PC, HANG
    407
    408
         001640
                    016701
                              000000G
                                                   9事:
                                                             MOV.
                                                                       RTNPT,R1
                                                                                            :POINT.TO.ROUTINE
:JUMP.TO ROUTINE.
    409 001644
                    000171
                              000000
                                                             JMP.
                                                                       @(R1)
    410
    411
    412
                                                             PRINT FROM FSA · A
    413
    414 001650
    415
                    012767
         001650
                              000000 · 000000G
                                                             MOV
                                                                       #T$FSAA,APLACE
                                                                                            :SELECT-FSA-A-FOR-SUBRIN
    416
         001656
                    016746
                              000000G
                                                             MOV.
                                                                       AHIGH,-(SP)
ALOW,-(SP)
                                                                                            :UPPER · MEMORY · LIMIT ·
    417
         001662
                    016746
                              000000G
                                                             MOV.
                                                                                            :LOWER·LIMIT
    418
         001666
                    004767
                              000000G
                                                             JSR-
                                                                       PC.BUFFSA
                                                                                            :CHECK · ADDRESS · AGAINST · MEMORY
    419 001672
                    103402
                                                             BCS
                                                                       1$
                                                                                            :CHECK · FAILED ·
    420 001674
                                                                       PC.PRCHTL
                   004767
                              000000G
                                                             JSR.
                                                                                            :PRINT MEMORY
    421 001700
                   000167
                              000422
                                                   1$:
                                                                       PR1X
                                                                                            :AND EXIT
    422
    423
                                                             PRINT-FROM-FSA-B
                                                                                           SELECT FSA B FOR SUBRTH 12.
    424
    425
         001704
                                                  PRBM::
    426
         001704
                   012767
                              000004 000000G
                                                             MOV
                                                                       #T$FSAB; Ar
    427 001712
428 001716
                   016746
                              000000G
                                                             MOV
                                                                       BHIGH, - (SP)
                   016746
                              000000G
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     429 001722-
                    004767
                              000000G
                                                                                           :CHECK:ADDRESS:AGAINST"MEMORY.LIMITS:
:CHECK:<del>FAIL</del>ED
                                                             JSR
                                                                      PC.BUFFSA
    430 001726
                    103402
                                                            BCS
                                                                      PC,PRCHTL
    431 001730
                    004767
                              000000G
                                                            JSR.
                                                                                           :PRINT MEMORY
    432.001734
                   000167
                              000366
                                                  1$:
                                                            JMP
                                                                      PR1X
                                                                                           :AND EXIT
     433
     434
                                                            PRINT-FROM-FSA-C-
    435
         001740
    436
                                                                                          :SELECT ESA COMPOR SUBE N
:MOVE DEPER MEMORY LIMIT
FLOWER COMMITS
:CHECK ADDRESS AGAINST MEMORY LIMITS
         001740
    437
                   012767
016746
                              000014 .000000G
                                                            MOV
                                                                      #T$FSAC,APLACE
CHIGH,-(SP)
CLOW,-(SP)
         001746
     438
                              000000G:
                                                            MOV-
     439 001752
                    016746
                              000000G
                                                            MOV.
     440 001756
                    004767
                              000000G
                                                            ISR
                                                                      PC, BUFFSA
    441 001762
                    103402
                                                            BCS
                                                                      1 $
                                                                                          :CHECK-FAILED.
    442.001764
                              000000G
                    004767
                                                            JSR
                                                                      PC.PRCHTL.
                                                                                          ; PRINT MEMORY
     443
         001770
                   000167
                              000332
                                                  1$:
                                                                                          :AND EXIT
    444
     445
    446
                                                            PRINT FROM INPUT BUFFER
     447
    448 001774
449 001774
                                                  PRIB::
                   012767
                                                                      #T$DISK,APLACE
IHIGH,-(SP)
ILOW,-(SP)
                                                                                          ;SELECT.DISK,SIMULATION
;SUPPLY UPPER MEMORY LIMIT
;LOWER LIMIT
;PREPARE TO LOAD
                              000200 000000G
                                                            MOV
    450
         002002
                   016746
                              00000000
                                                            MOV-
    451 002006
                   016746
                              000000G
                                                            MOV.
    452.002012
                   004767
                                                            JSR
                                                                      PC.BUFS2
     453
         002016
                    103543
                                                                      PR1X
                                                                                          : ERROR · ENCOUNTERED
    454
    455
         002026
                   016702
011267
                             000000G
                                                            MOV-
                                                                                          :LOAD IB ADDRESS
:READ IB
                                                                      MSTR2.R2
(R2).DATA1
     456
         002024
                              000000G
    457
         002030
                    004767
                              000000G
                                                            JSR
                                                                      PC, PRDATA
                                                                                          CALL PRINT SUBROUTINE.
    458
    459 002034
                    066767
                             000000G-000000G-
                                                                      INCVAL, MSTR2
                                                                                          :ADVANCE ADDRESS :HAS UPPER MEMORY LIMIT BEEN REACHED :NO. CONTINUE ....
    460 002042
                    026767
                                                            CMP
                                                                      MSTR2, MEND
    461 002050
                    101763
                                                            BLOS
                                                                      1$
    462.002052
                                                                                          :LOOP ON ?
                    032767
                             000000G-000000G
                                                            BIT
                                                                      #LOOP, BASE
    463
         002060
                   001522
                                                                                          :NO. EXIT
:REINIT ADDRESS
                                                            BEQ
    464 002062
                   016767
                              000000G-000000G-
                                                            MOV
                                                                      MSTRT, MSTR2
    465 002070
                   000753
                                                                      1$
                                                                                          :START OVER
    466
    467
    468
                                                            PRINT-FROM-OUTPUT-BUFFER
    469
    470 002072
                                                  PROB::
    47 i
         002072
                   012767
                             000040 000000G
                                                                                          :SELECT: INTERFACE AND CONTROL FOR SUBRTN:
:SUPPLY UPPER MEMORY LIMIT
:LOWER LIMIT
                                                            MOV
                                                                      #T$ICD, APLACE.
    472-002100
                   016746
                             000000G
                                                                      OHIGH,-(SP)
OLOW,-(SP)
PC,BUFS2
                                                            MOV.
    473 002104
474 002110
                   016746
                              000000G
                                                            MOV.
                   RR4767
                              000000G
                                                            JSR
                                                                                          :PREPARE FOR LOAD
    475 002114
                   103504
                                                            BCS.
                                                                                          :FRROR.
    476
         002116
002124
    477
                   012767
                              000034
                                       176362 15:
                                                            MOV-
                                                                      #T$OBRA,TD$TAW
MSTR2,TD$TDW
#T$OB,TD$TAR
                                                                                          ;SELECT.OUTPUT.BUFFER.WRITE.REG
    478
                             000000G 176364
000036 176372
176374 000000
                   016767
                                                            MOV.
                                                                                          MOVE ADDR TO TRANSFER REG
    479 002132
                   012767
                                                            MOV.
    480 002146
                   016767
                                       000000G
                                                            MOV.
                                                                      TD$TDR,DATA1
                                                                                          :LOAD.
        002146
                   004767
                                                                                          CALL PRINT SUBROUTINE
                             000000G
                                                            JSR -
                                                                      PC.PRDATA
    482
    483 002152
                   866767
                             000000G · 000000G ·
                                                            ADD.
                                                                      INCVAL, MSTR2
                                                                                          :ADVANCE ADDRESS:
:HAS UPPER MEMORY LIMIT BEEN REACHED
:NO. CONTINUE
    484 002160
                   026767
                             000000G:000000G
                                                            CMP .
                                                                      MSTR2, MEND
    485 002166
                   101753
                                                            BLOS.
                                                                      135
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                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    486 002170
                   032767
                             000000G · 000000G ·
                                                          BIT
                                                                    #LOOP,BASE
                                                                                       ;LOOP . ON ?
    487
         002176
                   001453
                                                          BEQ
                                                                    PRIX
                                                                                       :NO, EXIT
    488 002200
                   016767
                             000000G - 000000G
                                                          MOV
                                                                    MSTRT, MSTR2
                                                                                       ; REINIT - ADDRESS
    489 002206
                   000743
                                                          BR
                                                                                       :START-OVER-
    490
    491
    492
                                                          PRINT FROM BYTE TRANSLATOR
    493
    494 002210
                                                PRBT::
         002210
002216
    495
                   012767
                             000040
                                     000000G
                                                                    #T$ICD, APLACE
                                                          MOV
                                                                                       :SELECT: INTERFACE: AND: CNTL FOR: SUBRTN:
:SUPPLY: MEMORY: UPPER: LIMIT:
:LOWER: LIMIT:
    496
                   016746
                             000000G:-
                                                          MOV
                                                                    THIGH,-(SP)
TLOW,-(SP)
PC,BUFSET
         002222
    497
                   016746
                             000000G
                                                          MOV:
    498 002226
                   004767
                             000000G
                                                          JSR
                                                                                       :PREPARE FOR LOAD
    499
         002232
                   103435
                                                          BCS
                                                                    PR1X
                                                                                       :ERROR
    500
    501 002234
                   012767
                             000030
                                      176362
                                                1$:
                                                          MOV
                                                                    #T$BTAR, TD$TAW
                                                                                       :SELECT-BYTE-TRANS REG-
    502.002242
                             000000G 176364
                   016767
                                                          MOV
                                                                    MSTR2,TD$TDW
#T$BT,TD$TAR
                                                                                       :MOVE · ADDR · TO · TRANSFER · REG
    503 002250
504 002256
                   012767
                             000020
                                      176372
                                                          MOV
                                                                                       :SELECT BYTE TRANS MEMORY
                   016767
                             176374
                                      000000G
                                                          MOV
                                                                    TD$TDR.DATA1
                                                                                       ;LOAD BYTE TRANS;
;CALL PRINT SUBROUTINE
     505
         002264
                   004767
                             000000G
                                                          JSR
                                                                    PC.PRDATA
    506
    507
         002276
                             000000G-000000G-
                   066767
                                                          ADD
                                                                    INCVAL, MSTR2
                                                                                       #ADVANCE ADDRESS: #HAS-UPPER MEMORY-LIMIT-BEEN REACHED #NO. CONTINUE: #LOOP-ON ?-
     508
         002276
                                                          CMP BLOS
                   026767
                                                                    MSTR2, MEND
    509 002304
                   101753
                                                                    1$
                   032767
001404
    510
         002306
                             000000G - 000000G
                                                                    #LOOP, BASE
    511
         002314
                                                          BEQ.
                                                                    PR1X
                                                                                       :NO, EXIT
    512-002316
                   016767
                             000000G · 000000G
                                                          MOV.
                                                                    MSTRT, MSTR2
                                                                                       :REINIT ADDRESS
    513
514
         002324
                   000743
                                                          BR
                                                                    1$
                                                                                       :START-OVER
    515
    516 002326
                                                PRIX:
    517 002326
                   042767
                             000000C-0000000G
                                                          BIC.
                                                                    #<OUT+ONCE>.BASE.;CLEAR.CONTROL.FLAGS
    518 002334
                   004767
                             000000G
                                                          JSR-
                                                                    PC.KILL.
                                                                                       :KILL-AST-(IF-THERE-WAS-ONE)
     519
                   000167
         BB234B
                             ВВВВВВВВ
    520
    521
                   000001
                                                          .END
```

P. MANY

```
BYTE33= 000041
                                                                BYTE85= 000125
                                                                                                          000060RG
                                                                                                                          002.Q$CHB.=.000400
                                BYTE34= 000042
                                                                BYTE86= 000126
                                                                                                LD1LH = 000006 G
ALUCKE= 040000
                                                                                                                                Q$CHRL=:000200
                                BYTE35 = . 000043
                                                                BYTE87= 000127
                                                                                                LD1TBL
                                                                                                          000000RG
                                                                                                                          002 Q$CLR - = 000040
                                                                                                                          002 - Q$CLR - = - 000040
002 - Q$CNC - = - 030000
Q$CP - = - 000060
Q$CPC - - 0000160
Q$CPC - - 000260
Q$CSC - - 010000
Q$CSCL - - 000360
ALUOE.=.004000
                                BYTE36= 000044
                                                                BYTE88= 000130
                                                                                                LD1X-
                                                                                                          001344R
APLACE= ******* GX
                                BYTE37 = . 000045
                                                                BYTE89 = 000131
BYTE9 = 000011
                                                                                                LOC.EN= 000100
A01 = 010000
BASE = ********* GX
                                BYTE38= 000046
                                                                                                LOC.WA= 040000
                                BYTE39 = 000047
BYTE4 = 000004
                                                                BYTE90= 000132
                                                                                               LOC:WB= 100000
LOOP = ******** GX*
MAREN1= 000001
BHIGH = ******* GX
                                                                BYTE91= 000133
BINWD - - ***** GX
                                BYTE40 = . 000050
                                                                BYTE92= 000134
BITVAL = 000000
                                BYTE41= 0000051
                                                                BYTE93= 000135
                                                                                               MAREN2= 004000
MARLOD= 010000
MAROUT= 000002
                                                                                                                                Q$CSET= 0000002
BIT0 = 000001
                                BYTE42= 000052
                                                                BYTE94= 000136
                                                                                                                               Q$CSP.=.020000
Q$DMA.=.000001
BITI
        = 0000002
                                BYTE43= 000053
                                                                BYTE95= 000137
BYTE96= 000140
BIT10 = 002000
                                BYTE44= 000054
                                                                                               MAR.LO= 002000
MAR.OU= 000040
MBKALL= 001000
                                                                                                                                Q$ENBK = . 040000
BIT11 = 004000
                                BYTE45 = . 000055
                                                                BYTE97 = . 000141
                                                                                                                                Q$ENOP = 020000
BIT12 - 010000
BIT13 - 02000
                                BYTE46= 000056
                                                                BYTE98= 000142
                                                                                                                               Q$FAL·= 004000
Q$FC = 000045
Q$FO = 000044
                                BYTE47= 000057
                                                                BYTE99= 000143
                                                                                                MBKCLK= 000400
BIT14 = 040000
                                BYTE48= 000060
                                                                BYTVAL = . 000144
                                                                                                MEND: = ********* GX:
BIT15 = 100000
BIT2 = 000004
                                BYTE49=-000061
                                                                CBKALL= 001000
                                                                                                MMADRD= 000100
                                                                                                                               0$FP = 000046...
Q$HBF = 000046...
                                BYTE5 = 000005
                                                                CBKCLK=.000400
CHIGH-=.******* GX-
                                                                                                MMLEFT= . 000002
        = 000010
BIT3
                                BYTE50= 000062
BYTE51= 000063
                                                                                                MMOE - 000004
                                                                                                                                Q$ICP -- 000006
        = · 000020
= · 000040
                                                                CLOW- = - ****** GX
                                                                                                MMURTE = . 0000010
                                                                                                                               Q$IHB -- 000003
BITS
                                BYTE52= 000064
                                                                CNOBRE = 100000
COMXX = ****** GX
                                                                                                MNOBRE = 100000
                                                                                                                               Q$IHRL= 000002
        = .000100
BIT6
                                BYTE53= 0000065
                                                                                                MREN1 = 000001
                                                                                                                                Q$IMRP= 000007
        = 000200
BIT7
                                BYTE54= 000066
                                                                CPCCEN= 010000
                                                                                                MREN2 -- 020000
                                                                                                                               Q$LBD = 001000
Q$LBDP = 001001
Q$LBP = 000001
        = 000400
                                BYTE55= 000067
BIT8
                                                                CPREAD = . 040000
                                                                                                MSTRT · = · жжжжжжж GX ·
BIT9
        = 001000
                                BYTE56= 000070
                                                                CPWRTE = - 020000
                                                                                                MSTR2 · = · ****** GX ·
BLOW- = - жжжжжжж 3X-
                                BYTE57= 0000071
                                                                CSADRD=-000004
                                                                                                MSYN - 000040
                                                                                                                               Q$LDCD= 000003
BUFFSA= ********* GX-
BUFSET= ********** GX-
                                                                CSEQCI = 100000
CSOE = 000040
                                BYTE58= 000072
                                                                                                        = 000144
                                                                                                                               Q$LDMD= 000004
                                BYTE59=-000073
BYTE6 =-000006
BYTE60=-000074
                                                                                                OHIGH-=-жжжжжж GX
                                                                                                                                Ö$LDPP- 002000
BUFS2 = ******* GX
                                                                                                OLOW: = ********* GX:
                                                                                                                               Q$LHP = 010000
Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
                                                                CSWRTE = - 000100
BYTE0 = 000000
BYTE1 = 000001
                                                                DATA1 = ******* GX
                                                                                                ONCE - ***** GX
                                BYTE61= 000075
                                                                DBR:RD=-000001
                                                                                                       = ******** GX
BYTE10= 0000012
                                BYTE62= 000076
                                                                DB$CPP= 001457
                                                                                               PACK -
                                                                                                       = · ****** GX
BYTE!!= 000013
                                BYTE63= 000077
                                                                DB$SPT= 000026
                                                                                                                               Q$MRP2= 000040
Q$MSC = 040000
Q$MSET= 000004
Q$MSP = 100000
                                                                                               PDATA: = : ******* GX:
BYTE12= 000014
                                BYTE64= 000100
                                                                DB$TPC=-000023
                                                                                                       = . 000010
                                                                                               PLB.
BYTE13= 000015
BYTE14= 000016
                                BYTE65= 000101
                                                                DISPGS= 100000
DMAAWR= 000005
                                                                                                PLC.
                                                                                                        = 0000020
                                BYTE66 - 000102
                                                                                               PLD.
                                                                                                        - 000030
BYTE15= 000017
                                BYTE67=-000103
BYTE68=-000104
                                                                DMARRD= 000003
                                                                                               PLRWR - = - 000200
                                                                                                                               Q$NCLK=:176000
Q$PP = 000100
BYTE16= 000020
BYTE17= 000021
                                                                DMARWR = . 000004
                                                                                               PLR.EN= 000200
                                BYTE69=-000104
BYTE69=-000105
BYTE7 =-000007
BYTE70=-000106
BYTE71=-000107
                                                                                                                          002 · Q$PPSW= · 000320
002 · Q$PP2 · = · 000300
                                                               ENBR: =:010000
ERR1 =:********** GX:
                                                                                                          001650RG
BYTE18= 000022
                                                                                               PRBM-
                                                                                                          001704RG
BYTE19= 000023
                                                                ERR3
                                                                        = · ****** GX
                                                                                               PRRT.
                                                                                                          002210RG
                                                                                                                          002 Q$QHLT=:000013
BYTE2 - - 000002
                                                                FRR4
                                                                        = · ********** GX
                                                                                               PRCM-
                                                                                                          001740RG
                                                                                                                          002 · Q$QL = · 000043
Q$QLA · = · 000053
BYTE20=-000024
BYTE21=-000025
                                BYTE72=-000110
                                                                       = · ********* GX
                                                                ERRA
                                                                                               PRONTL = ****** GX
                                BYTE73=-000111
                                                                FIND
                                                                       .= · жжжжжжж GX
                                                                                               PRDATA = · ***** GX
                                                                                                                               Q$QLB - - 000054
BYTE22= 000026
                                BYTE74= 000112
                                                                HANG
                                                                        = · ****** GX
                                                                                               PRIB-
                                                                                                          001774RG
                                                                                                                          002 · Q$QLR · = · 000001
002 · Q$QW = · 000042
BYTE23 = . 000027
BYTE24 = . 000030
                                BYTE75= 000113
                                                                IHIGH = · ***** GX
                                                                                               PROB
                                                                                                          002072RG
                                BYTE76= 000114
                                                                ILOW-
                                                                       = · ****** GX
                                                                                               PR1
                                                                                                          001362RG
                                                                                                                          002 · Q$RDCD= · 000005
BYTE25= 000031
                                BYTE77 - 000115
                                                                INCVAL = - жижжижи GX
                                                                                               PRILN - 000006 G
                                                                                                                               Q$RDMD=-000006
BYTE26= 000032
BYTE27= 000033
                                BYTE78= 000116
                                                                                                                          002 0$REBK - 001000
002 0$REBK - 001000
002 0$RSC - 004000
0$RSC - 004000
                                                                KILL: = эмжжжжж GX
                                                                                               PRITBL 000030RG
                                BYTE79= 000117
BYTE8 = 000010
                                                                          000332RG
                                                                LDAM.
                                                                                          002 PR1X 002326F
002 QR$CR1= 176420
                                                                                                          002326R -
BYTE28= 000034
                                                                LDBM-
                                                                          000366RG
BYTE29 - 000035
BYTE3 - 000003
                                BYTE80 = . 000120
                                                               I DRT.
                                                                          001112RG
                                                                                          002 · QR$CR2= · 176422
                                BYTE81= 000121
                                                                LDCM-
                                                                          000422RG
                                                                                          002 · QR$LBR= · 176424
                                                                                                                                       = 100000
                                                                                                                               Q$SM
BYTE30= 000036
                                           BYTE82=-000122
                                                                                                                               Q$SP
BYTE31= 000037
                                BYTE83= : 000123
                                                                                                                               Q$SP2 - - 000340
BYTE32= 000040
                               BYTE84= 000124
                                                                                                                               RGO.EN= 000200
```

1

```
TMEM MACRO M1110 27-MAR-80 15:37 PAGE 6-5
SYMBOL TABLE Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
RGQ.VA≃ 020000
                                  TSCLK - - AA2AAA
                                                                    WORD1 ≃ 000002
                                                                                                      WORD40= 000120
                                                                                                                                        WORD71≕.000216
                                  T$DISK=-0002000
T$DRD =-0000004
        = - *****
                     GX
                                                                    WORD10= 000024
WORD11= 000026
                                                                                                                                        WORD72= 000218
WORD72= 000220
WORD73= 0002224
                                                                                                      WORD41= 000122
RTNPT = ******
                                                                                                      WORD41 000122
WORD42= 000124
WORD43= 000126
                     GX
SCAN: = ****** GX:
SEQ:CI=:000010
                                  T$EMEM= · 010000
                                                                    WORD12=-000030
                                                                                                                                        WORD74= 000222
WORD75= 000226
WORD76= 000230
                                  T$FSAA= . 000000
T$FSAB= . 000004
                                                                    WORD13= 000032
WORD14= 000034
                                                                                                      WORD44= 000130
5$CLR - = - 000000
                                                                                                      WORD45= 000132
5$LA - 000001
                                  T$FSAC= 000014
                                                                    WORD15= 000036
                                                                                                      WORD46= 000134
WORD47= 000136
WORD48= 000140
                                                                                                                                        WORD77= 000232
S$QB· = 0000005
                                  T$FSB2=-000010
                                                                    WORD16= 000040
                                                                                                                                        WORD78 - 000234
        = 000006
S$QR ·
                                  T$IB- --000026
                                                                    WORD17=-000042
                                                                                                                                       WORD79= 000236
WORD8 = 000020
        = 000004
                                  T$IBAR= 000024
S$QX-
                                                                    LIORDIS = : AAAAAA
                                                                                                      WORD49= 000142
S$SR
        = 000007
                                  T$IBE - = 020000
T$IBF - = 040000
T$ICD - = 000040
                                                                    WORD19= 000046
                                                                                                     WORD5 = 000012
WORD50= 000144
                                                                                                                                        WORD80= 000240
        = 0000010
9591
                                                                    WORD2 -- 000004
                                                                                                                                        WORD81= 000242
S$S2
        = 000014
                                                                    WORD20=.000050
                                                                                                      WORD51 = 000146
                                                                                                                                       WORD82= 000244
WORD83= 000246
TD$CTR= 176370
                                  T$MODE = . 004000
                                                                    WORD21=-000052
WORD22=-000054
                                                                                                      WORD52= 000150
                                  T$0B: = 000036
T$0BE: = 004000
T$0BF: = 010000
TD$CTW= 176360
TD$INL= 004000
                                                                                                     WORD53= 000152
WORD54= 000154
                                                                                                                                        WORD84= 000250
                                                                    WORD23=-000056
                                                                                                                                       WORD85 = 000252
WORD86 = 000254
TD$MEM= 000270
                                                                    WORD24= 000060
                                                                                                      WORD55= 000156
TD$0AR=-176344
                                  T$0BRA= ∙000034
                                                                    WORD25= 000062
                                                                                                     WORD56= 000160
WORD57= 000162
WORD58= 000164
                                                                                                                                       WORD88= 000256
WORD88= 000260
TD$0TR= 176346
                                  T$0BWA=-000032
                                                                    WORD26 = 0000064
TD$QRD= 000274
                                  T$0UTA=-100000
                                                                    WORD27= 000066
                                                                                                                                        WORD89-000262
                                  T$RBD0= 000200
TD$SW- = - 176376
                                                                                                                                       WORDS = 0000282
WORDS = 0000264
WORDS = 000266
WORDS = 000270
                                                                    WORD28=-000070
                                                                                                      WORD59=-000166
 TD$TAR=-176372
                                  T$RNB - = - 000040
                                                                    WORD29=-000072
                                                                                                      WORD6 = 000014
                                  T$RSET= 040000
 "D$TAW=+176362
                                                                    WORD3 = 000006
                                                                                                      WORD60= 000170
                                  T$SC: = .0000022
T$SCLK= .020000
T$SEG!= .000000
(D$TDR=-176374
                                                                    WCRD30= 000074
                                                                                                      WORD61= 000172
TD$TDЫ= 176364
                                                                    WORD31 = 000076
                                                                                                      WORD62= 999174
                                                                                                                                        WORD93=-000272
THIGH -- ******
                                                                    WORD32= 000100
WORD33= 000102
WORD34= 000104
                                                                                                      WORD63=-000176
                                                                                                                                       WORD94= 000274
WORD95= 000276
TLOW: = ****** GX
                                  T$SEG2= 0000001
                                                                                                      WORD64= 000200
T$AD - - 000020
                                  T$SEG3=-000002
                                                                                                                                       WORD96=-000300
WORD97=-000302
WORD98=-000304
                                                                                                     WORD65= 000202
WORD66= 000204
T$BA - - 000002
                                  T$SO - - 000001
T$UBUS - 100000
                                                                    WORD35= 000106
                                                                    WORD36=-000110
WORD37=-000112
                                                                                                      WORD67= 000206
T$B$0·≕·100000
                                  T$1CLK= 000400
                                                                                                      WORD68= 000210
                                                                                                                                        WORD99 = . 000306
T$8T - - 000020
                                  T$8BEN=-000020
                                                                    WORD38=-000114
                                                                                                     WORD69=.000212
WORD7 ≈.000016
                                                                                                                                        WRDVAL = . 000310
T$BTAR = . 000030
                                  UBD.IN= 000020
WORD0 = 000000
                                                                    WORD39--000116
                                                                                                                                       XTREAD=: 001000
XTWRTE=: 000400
T$BTD - - 002000
                                                                    WORD4 = 000010
                                                                                                      WORD70= 000214
T$CD - - 000100
. ABS:
           000000
                           ดดด
           000000
                           001
TMEM.
           002344
                           002
ERRORS DETECTED:
                         0
VIRTUAL · MEMORY · USED:
                              3537 WORDS- (-14 PAGES)
DYNAMIC MEMORY: 4916 WORDS: (18 PAGES)
ELAPSED:TIME: 00:00:51
[MEM.FMEM/-SP=[20,1]IM.[20,1]TMEM.
```

```
TDATA.
                                   27+MAR-80 15:36 PAGE 5
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
             MACRO M1110
                                                                                   .FITLE - FDATA
          234567
             000000
                                                                                   .PSECT TDATA
                                                                                   .LIST. MEB
                                                                                  TERM DETECTOR 'MANUAL' DEBUGGING AIDS
DATA COMMANDS (INPUT BUFFER AND BYTE TRANSLATOR)
          89
                                                                                  COMMANDS:
        10
                                                                                               FILL LOCAL-BUFFER-WITH-DATA-FOR-TD INPUT-BUFFER
CHANGE DATA-IN LOCAL-BUFFER-OR-IN-LOCAL-BYTE
TRANSLATOR-TABLES-
LIST CONTENTS-OF-LOCAL-DATA-BUFFER OR-LOCAL-
BYTE TRANSLATOR-TABLES-
MARK THE-END-OF-THE-LOCAL-DATA-BUFFER-
READ LOCAL-DATA-BUFFER-OR-LOCAL-BYTE-TRANSLATOR-
TABLES-EPOM-DISK-
                                                                                  DA
                                                                                  СН
        12
        13
                                                                                  LΙ
                                                                                  EΝ
                                                                                  DF
        17
18
19
                                                                                               TRANSFER LOCAL DATA BUFFER TO TERM DETECTOR.
INPUT BUFFER OR LOCAL BYTE TRANSLATOR TERM DETECTOR.
TERM DETECTOR BYTE TRANSLATOR
                                                                                  TR
       201
221
222
232
242
252
293
313
333
343
353
                                                                                  ONCE A: COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED)
THIS MODULE RETURNS CONTROL TO THE MODULE TMAIN AT LOCATION
"COMXX".
                                                                                  .MCALL · OPEN$R,GET$,CLOSE$
                                                                                  TABLE OF VALID BUFFER MNEMONICS AND THEIR ASSOCIATED ROUTINE ADDRESSES
             000000
                                                                    CH1TBL::
             000000
000002
                                              102
                                                                                  .ASCII
                                                                                                                           ; INPUT BUFFER
                          0002601
102
                                                                                  .WORD
                                                                                               CHIB
       36
37
38
39
             000004
                                              124
                                                                                  .ASCII.
                                                                                                /BT/
                                                                                                                           :BYTE TRANSLATOR
             000006
                           0003767
                                                                                  .WORD
                                                                                               CHBT
                           000002
                                                                    CHILH.
                                                                                               <.-CH1TBL>/4
       40
41
42
                                                                                 LIST.
            000010
000010
                                                                    LI1TBL::
        43
                                111
                                             102
                                                                                  .ASCII
                                                                                               ZTB2
                                                                                                                           : INPUT BUFFER
        44
            000012
                          0006723
                                                                                  .WORD
                                                                                               LIIB
                          102
001072
       45
46
            000014
                                             124.
                                                                                  .ASCII
                                                                                                                           :BYTE · TRANSLATOR ?
            000016
                                                                                  .WORD
                                                                                               LIBT
        47
                           000002
                                                                    LI1LH.
                                                                                               <.-LI1TBL>/4
      48
49
50
51
52
53
54
55
56
57
                                                                                 DATA · FILES
            000020
000020
000022
                                                                    DF1TBL::
                          001366
                                             102
                                                                                  .ASCII-
                                                                                               /IB/
                                                                                                                          : INPUT-BUFFER
                                                                                              DFIB
                                                                                  .WORD
                          102
001576
            000024
                                                                                                                         :BYTE · TRANSLATOR
                                             124
                                                                                  .ASCII.
                                                                                               ZBTZ
           000026
                                                                                  .WORD
                                                                                               DFBT
                          000002
                                                                   DF1LN
                                                                                               <.-DF1TBL>/4
```

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CIA-RDP85-00514R000200020001-3

```
0 M1110 27-MAR-80 15:36 PAGE 5-1
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
TDATA
        58
                                                                                    TRANSFER
        59
        60
             000030
                                                                      TRITBL::
        61
             000030
                                                102
                                                                                     .ASCII
                                                                                                                               ; INPUT BUFFER
        62
63
64
                                                                                     .WORD
             000032
                           902134
                                                                                                   TRIB
             000034
                                 102
                                                124.
                                                                                                   ZRTZ
                                                                                                                               :BYTE TRANSLATOR
                            002226
             000036
                                                                                                   TRBT
                                                                                     .WORD
        65
                            000002
                                                                      TR1LH
                                                                                                   <.-TR1TBL>/4
        66
67
        68
                                                                                    DATA:
        69
70
71
72
73
74
75
                                                                                    NO OPERANDS
                                                                                    NO OPERANDS:
THIS ROUTINE PUTS OUT PROMPTS FOR DATA AND READS THE COMMAND-
LINE, IT THEN CALLS A SUBROUTINE IN THAIN WHICH PROCESSES,
THE COMMAND LINE AND PLACES IT INTO TWO BUFFERS, ONE OF THE S
BUFFERS IS SIMPLY A MIRROR OF THE COMMAND LINE INPUT TO BE:
USED FOR VERIFICATION: THE OTHER BUFFER IS THE 6-BIT BYTE
BUFFER WHICH WILL EVENTUALLY BE TRANSFERRED TO THE
TERM DETECTOR INPUT BUFFER (SEE THE TRY AND TRUS
         78
79
                                                                                     COMMANDS).
         80
         81
                                                                                     NB. SINCE THE LOCAL INPUT BUFFER IS TRANSFERRED TO
                                                                                    THE TERM DETECTOR IN 16-BIT WORDS AND THERE ARE 8
6-BIT BYTES IN 3 16-BIT WORDS. THE NUMBER OF 6-BIT
BYTES IN THE LOCAL DATA BUFFER SHOULD BE DIVISIBLE
BY 8. NO CHECKING IS DONE, HOWEVER:
         82
         83
         84
85
         86
         87
                                                                                     CLEAR · LOCAL · DATA · BUFFER · (BOTH · THE · 6-BIT · BYTE · TABLE
         88
                                                                                    AND THE 8-BIT ASCII MIRROR TABLE).
         90
         91
              000040
                                                                       DA1::
                                                                                                                             :CLEAR-BIT-SHIFT-COUNTER-
:CLEAR-LENGTH-OF-'DATA'
:POINT-TO-6-BIT-BYTE-TABLE-
+1-R1 :NUMBER-OF-WORDS-IN-TABLE
                            005067
         92
              000040
                                          000000G
                                                                                    CLR
                                                                                                   COUNT:
              000044
                            005067
                                          000000G
                                                                                    CLR
                                                                                                   DATALN:
              000050
                                                                                     MOV
                            012700
                                           000000G
                                                                                                   #DTBL .RA
         95
              000054
                            012701
                                           001000
                                                                                                   #<<1364.*3>/8.>
         96
              000060
                            005020
                                                                       1$:
                                                                                     CLR
                                                                                                   (R0) +
                                                                                                                                :CLEAR · DATA · TABLE ·
         97
              000062
                            005301
                                                                                                   R1
1$
                                                                                     DEC
              000064
                                                                                     BHE
         99
              000066
000072
                            012700
012701
                                                                                                                               ; POINT TO ASCII MIRROR TABLE; NUMBER OF WORDS; CLEAR TABLE;
        100
                                           ananang.
                                                                                     MOV.
                                                                                                   #DSAVE,R0
                                                                                     MÔÝ.
        101
                                                                                                   #1364./2,R1
                                          001252
              000076
                            005020
                                                                                                   (RØ)+
                                                                       2$:
                                                                                     CLR
        103
              000100
                            005301
        104 000102
                            003375
        105
                                                                                     READ 'DATA' FROM CONSOLE CALL ROUTINE TO ADD 1 COMMAND LINE'S WORTH OF DATA TO THE TABLES. A <CR> RESPONSE TO THE PROMPT TERMINATES THE COMMAND.
        106
        107
        108
        109
        110
              000104
                            012704
                                          имимиясь.
                                                                                     MOV
                                                                                                   #DTBL,R4
#DSAVE,R5
                                                                                                                               :R4 -> 6-BIT-BYTE-TABLE:
:R5 -> MIRROR-INPUT-TABLE
:GET-COMMAND-LINE:
        111
                            012705
        112-000110
                                          000000G
                                                                                     MOV
        113 000114
                            004767
                                          000000G
                                                                                                   PC.GCONLY
                                                          TST GCMLEN: :ANYTHING THERE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001.3
             000120
                            005767
                                          000000G
```

MACRO M1110 27-MAR-80 15:36 PAGE 5-2 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 TDATA -

DAIX PC.DBLD. DAIX DPLUS.DATALN. :NO, EXIT:
:ELSE:PROCESS:DATA CHARS:
:DATA:OVERFLOW:OR:ERROR:
:ACCUMULATE:LENGTH OF:'DATA:
:GET:ANOTHER:LINE: 115 000124 116 000126 117 000132 BEQ: JSR: BCS: 001407 004767 000000G 103404 066767 117 000132 118 000134 119 000142 120 121 000144 122 000144 000000G - 000000G -ADD. 000764 BR ĎA1X:

COMXX.

JMP.

000167

000000G

MANAGE & MANAGE

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TDATA -
     124
     126
127
                                                                    CHANGE
                                                                    PERFORM SECOND LEVEL PARSING
                                                                         IN THE COMMAND:
                                                                    >CH · IB · Ø
     129
                                                                    PARSE THE . ' IB!
     130
131
132
     133
          000150
                                                         CH1::
                                                                                                      FIND THE BUFFER MNEMONIC IN COMMAND LINE OK, CONTINUE
     134
135
          000150
000154
                      004767
                                  000000G
                                                                    JSR
                      103004
                                                                    BCC.
                                                                               1$
      136
           000156
                      004767
                                  000000G
                                                                     JSR
                                                                               PC,ERR3
                                                                                                      ; 'MISSING OPERAND'
      i37
           000162-
                      000167
                                  000360
                                                                               CHIX
     138
      139
                                                                    MATCH - THE - MNEMONIC - FROM - THE - COMMAND - LINE - AGAINST - THE
      140
                                                                     TABLE OF VALID MNEMONICS.
      141
                                                                                                      ; NUMBER · OF · TABLE · ENTRIES ·
; TABLE · OF · RESPONSES / RTN · ADDRESSES
; CHECK · COMMAND · LINE · AGAINST · TABLE
      142.000166
                      012700
                                  999992
                                                         1$:
                                                                    MOV
                                                                               #CH1LN,R0
#CH1T9L,R2
           000172
                      012702
      143
                                  000000
                                                                    MOV.
      144
           000176
                       004767
                                  000000G
                                                                     JSR
                                                                               PC.SCAN.
      145
           000202
                       103004
                                                                    BCC
                                                                               2$
PC,ERR6
                                                                                                      ;OK, CONTINUE.
                                                                                                      ; "INVALID MEMORY MNEMONIC"
      146
           000204
                       004767
                                  000000G
                                                                    JSR
           000210
                      000167
                                  000332
                                                                               CHIX
      148
                                                                    SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE BUFFER, R1 -> ROUTINE ADDRESS. SCAN THE COMMAND LINE FOR THE START CHANGE ADDRESS.
      149
      150
      151
      152
                                                                     THE START ADDRESS IS ZERO-RELATIVE.
      153
                                                                                                      :SAVE POINTER: TO RTH ADDRESS
:LOCATE START CHANGE ADDR: IN COMMAND LINE
:OK. CONTINUE
      154 000214
                       010167
                                  000000G
                                                                    MOV
                                                                               RI.RTHPT
                                                         2$:
           000220
      155
                       004767
                                  000000G
                                                                    JSR
                                                                               PC.FIND.
           000224
                       103003
                                                                    BCC
                                                                                3$
      157
           000226
                       004767
                                  000000G
                                                                     JSR
                                                                                PC, ERR3
                                                                                                       ; "MISSING OPERAND!
                       000545
004767
      158
           000232
                                                                    BP
                                                                                CHIX
                                                                                                       :EXIT
                                                                                                      CONVERT COMMAND LINE VALUE TO BINARY CONVERSION SUCCESSFUL
      159
           000234
                                                                    JSR
                                  000000G
                                                         3$:
                                                                                PC*PACK
      160
           000240
                       103003
                                                                    BCC
                                                                                4$
                                                                                PC . ERR4
      161
           000242
                       004767
                                  000000G
                                                                     JSR
                                                                                                       : "INVALID NUMERIC VALUE:
      162
           000246
                       000537
                                                                    BR
                                                                               CHIX
      163
      164
                                                                     JUMP - TO - THE - ROUTINE - TO CHANGE - BUFFER - CONTENTS:
      165
                                                                    MOV-
                                                                                RTHPT,R1
                                                                                                       :POINT.TO.ROUTINE
           000250
                       016701
                                  000000G
      166
                                                         4$:
      167
                       000171
                                                                                                      #GO - THERE -
      169
170
                                                                     INPUT-BUFFER
                                                                    NB. SINCE-THE-LOCAL-INPUT-BUFFER IS-TRANSFERRED-TO-THE-TERM-DETECTOR-IN-16-BIT-WORDS-AND-THERE-ARE-8 6-BIT-BYTES-IN-3 16-BIT-WORDS, THE-NUMBER-OF-6-BIT-BYTES-IN-THE LOCAL-DATA-BUFFER-SHOULD-BE-DIVISIBLE-
      172
      176
177
                                                                    BY 8. NO CHECKING IS DONE, HOWEVER,
           999269
                                                         CHIB::
           000260
                                  BRABBAG
                       005767
                                              TST DATALN : : HAS DATA : COMMAND BEEN Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3-4
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TDATA.
                                                             Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                                                                                    :YES, CONTINUE
              000264
                                                                                                       PC, ERR7
                                                                                                                                    :DATA MUST PRECEED CHANGE
              000266
                             004767
                                            000000G
                                                                                        JSR.
                                                                                                       CHIX
       183
              000272 000525
       184
                                                                                        DETERMINE-WHERE IN THE TWO TABLES (6-BIT-BYTE AND 8-BIT-ASCII MIRROR TABLE) TO START CHANGING, DO THIS FOR THE GOBIT BYTE TABLE BY CONVERTING THE START CHANGE ADDRESS FROM THE COMMAND LINE INTO A AN OFFSET INTO THE 6-BIT BYTE TABLE, THE FIELD OFFSET START CHANGE ADDRESS ROUTINE OFFSET, THE FIELD BINDD IS THE START CHANGE ADDRESS FROM THE COMMAND LINE (IN BINARY).
       185
       186
       187
       188
        189
       199
        191
        192
                                                                                                      PC.OFFSET
#DTBL.R4
OFF6.R4
                                                                                                                                    :CALCULATE 6-BIT TABLE OFFSET
:R4 -> 6-BIT TABLE
:START CHANGING HERE
        193
              000274
                             004767
                                            000000G
                                                                          40$:
                                                                                        JSR
                             012704
066704
                                                                                        MOV.
        194
              000300
                                            000000G
        195
              000304
                                            000000G
                                                                                        ADD
                                                                                                       #DSAVE,R5
                                                                                                                                    :R5 -> 8-BIT MIRROR TABLE
               000310
                              012705
        197
              000314
                             066705
                                            000000G
                                                                                        ADD
                                                                                                       BINWD.R5
                                                                                                                                    :START - CHANGING - HERE
                                            000000G · 000000G
                                                                                                                                    :INIT:FOR:NEW-LENGTH:OF:BUFFFFB***(1994):to)
        198
              000320
                             016767
                                                                                        MOV
                                                                                                       BINWD, CHLEN-
        199
                                                                                        PUT-OUT-PROMPT-FOR-CHANGE-DATA: CALL-SUBROUTINE-TO-
PROCESS-COMMAND-LINE (SEE-*DA* COMMAND-ABOVE).
ADD-THE-NUMBER-OF-6-BIT-CHARACTERS-FROM-THE-
PROCESSED-COMMAND-LINE TO-THE-CHANGE-START
        200
        201
        202
        203
        204
                                                                                        ADDRESS.
        205
                                                                                                                                    :GET-COMMAND-LINE-
:ANYTHING-THERE-
:NO. <CR> RESPONSE
        286
               000326
                              004767
                                            йийийия
В
                                                                          5$:
                                                                                         TOP
                                                                                                       PC.GCONLY-
               000332
                              005767
                                                                                        TST-
        207
                                            000000G --
                                                                                                       GCMLEN.
                              001407
        208
               000336
                                                                                                       6$
                                                                                        BEQ
                                                                                                                                    ;CHANGE 'DATA' TABLE ;ERROR, EXIT
               000346
        209
                              004767
                                            000000G
                                                                                                       PC.DBLD.
                                                                                                       CH1X
        210 000344
                              103500
                                                                                        BCS
                                                                                                                                    :ACCUMULATE LENGTH OF DATA BUFFER :PROMPT FOR MORE CHANGE DATA
        211 000346
                              066767
                                            000000G-000000G
                                                                                        ADD
                                                                                                       DPLUS, CHLEN.
        212-000354
                              000764
        213
214
                                                                                        SPECIAL PROCESSING:
THE FIELD "DATALN" CONTAINS THE NUMBER OF 6-BIT BYTESIN THE LOCAL DATA BUFFER (SEE "DA" COMMAND). IF THE
        215
        216
                                                                                         CHANGE COMMAND IS IN THE FORM:
        218
                                                                                         >CH·IB·2·
                                                                                        >CH.IB.2:
AND.THE.DATA BUFFER.CONTAINS.'ABCDE' AND.THE.CHANGE.DATA.IS.
'1234', THE.DATA.BUFFER.WILL.CONTAIN.'AB1234' AND.DATALN.WILL.
BE UPDATED.TO.6, IF, HOWEVER, THE.CHANGE.DATA.IS.'12' THEN.
THE.DATA.BUFFER.WILL.CONTAIN.'AB12D' AND.DATALN.WILL REMAIN.
AT 5. THE.FIELD.'DATALN' CONTAINS.THE.LENGTH.OF.THE.DATA.
BUFFER.BEFORE.ANY.CHANGES, THE.FIELD.'CHLEN' CONTAINS.
THE.LENGTH.OF.THE.BUFFER.AFTER.THE.CHANGES, THE.LARGER.
OF THE.TWO.WILL.BECOME THE.NEW.'DATALN'.
        219
        220
        221
        223
        224
        226
227
        228 000356
                                            000000G 000000G 6$:
                                                                                         CMP
                                                                                                       CHLEN, DATALN
                                                                                                                                     ;WHICH-IS-BIGGER
                              026767
        229
               000364
                              003470
                                                                                         BLE
                                                                                                                                     :DATALN:
                                                                                                       CH1X
        230
               000366
                              016767
                                            000000G · 000000G
                                                                                         MOV
                                                                                                       CHLEN, DATALN.
                                                                                                                                     :REPLACE DATALN:
        231
               000374
                              000464
                                                                                                       CH1X
                                                                                                                                     :EXIT-
        232
        233
                                                                                         BYTE TRANSLATOR
THE FIELD BINUD CONTAINS THE CHANGE START ADDRESS WHICH IS A ZERO-RELATIVE WORD NUMBER. EG. THE COMMAND!
        234
        235
        236
                                                             Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
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TDATA
                                                                       WILL-START-CHANGING-THE-BYTE-TRANSLATOR-OVERRIDE-TABLE-
(SEE-BELOW) AT-WORD-7.
      238
      239
      240
     241
242 000376
                                                           CHRT::
                                                                                  BINWD,#KBTEND-BTRANS>:START-ADDRESS-IN-RANGE-3$:YES, CONTINUE-PC,ERR20::2START-ADDRESS-OUT-OF-RANGE HIGHT-
           000376
                       026727
                                   000000G · 000000C
      244 000404
                        103403
                                                                       BLO-
      245 000406
                       004767
                                   MANAMAG
                                                                       JSR
      246
           000412
                       000455
                                                                                   CH1X
                                                                                                          :FXIT
      247
                                                                      THE CHANGE COMMAND CREATES A BYTE TRANSLATOR OVERRIDE TABLE: (WHICH IS A COMPLETE COPY OF THE BYTE TRANSLATOR TABLE). ALL ALL CHANGES ARE APPLIED TO THE OVERRIDE TABLE. THE OVERRIDE TABLE IT TRANSFERED TO THE TERM DETECTOR BY EITHER THE TREOR THE TREOR THE TREOR THE TRANSFERED FOR THE TRANSLATOR TABLE. COPY THE BYTE TRANSLATOR TABLE TO THE OVERRIDE.
      248
      249
      250
      251
      252
      253
254
      255
      256
            000414
                       932767
                                   000000G.000000G.3$:
                                                                       BIT
                                                                                   #RIDE,BASE
                                                                                                          :FIRST-USE-OF-"CHANGE"
            000422
                        001014
                                                                                                          ;NO, LEAVE OVERRIDE TABLE ALONE FLAG ROUTINE ENTERED
                                                                       BHE
                                                                                   4$
                       052767
                                    000000G · 000000G
                                                                                   #RIDE, BASE
      258
           000424
                                                                       B13
           000432
000436
                                                                                                          ;POINT TO DEFAULT TABLE :
      259
                       012700
                                   000000G
                                                                                   #BTRANS, RØ
      260
                        012701
                                   000000G
                                                                       MOV:
                                                                                   #BTOVER,R1
      261 000442
                       012702
                                                                       MOV.
                                                                                   #<BTEND-BTRANS>/2,R2:;NUMBER:OF:WORDS
(R0)+,(R1)+ ;LOAD:OVERRIDE:TABLE:
                                   00000000
           000446
                       012021
                                                           30$:
                                                                       MOV.
      263
264
           000450
                       005302
                                                                       DEC
           000452
                       001375
                                                                                   30%
      265
                                                                       LOAD THE CHANGE START ADDRESS IN BYTES INTO R2
      267
      268 000454
                       B127B2
                                   ARRAGAG.
                                                                       MOV.
                                                           44:
                                                                                   #BTOVER, R2.
                                                                                                          :POINT-TO-OVERRIDE TABLE
      269
            000460
                       016703
                                   000000G
                                                                       MOV.
                                                                                                          ;LOAD-WORD-OFFSET;
;SHIFT-FOR-BYTE-OFFSET;
;START-CHANGING-HERE
                                                                                   BINWD,R3
           000464
      270
                                                                       ASL -
                                                                                   R3
      271 000466
                        060302
                                                                       ADD
      272
                                                                       PROMPT:FOR:A LINE:OF:CHANGE:DATA, THE:COMMAND:LINE MAY:CONTAIN:MORE:THEN:ONE:WORD:OF:DATA, EG:
      273
      275
                                                                        CHANGE 6 CONTIGUOUS WORDS WORTH OF BYTE TRANSLATOR CODES. A <CR> RESPONSE TO THE PROMPT TERMINATES THE COMMAND.
      276
      278
      279
            000470
                        004767
                                   000000G
                                                           5$:
                                                                       TSP.
                                                                                   PC.AGCONLY.
                                                                                                          : READ - COMMAND - LINE
      280 000474
                        004767
                                   имимиясь.
                                                                       ISR
                                                                                   PC.FIND.
                                                                                                          :LOCATE AN OVERRIDE WORD
:<CR> RESPONSE, EXIT
                                                                                                                                                           22 H . V
      281
            000500
                        103422
                                                                                   CHIX
                                                                       BCS
      282
      283
                                                                        \begin{array}{lll} {\tt CONVERT\cdot THE\cdot OVERRIDE\cdot VALUE\cdot TO\cdot BINARY.} & {\tt ANY\cdot ERROR\cdot IN} \\ {\tt CONVERSION\cdot TERMINATES\cdot THE\cdot COMMAND.} \end{array} 
      284
      285
                                                                                                          ;CONVERT NUMERIC VALUE:
            000502
                        004767
                                    000000G
                                                                       JSR
                                                                                   PC*PACK:
                                                                                                                                                         - J. J. J. J.
           000506
000510
      287
                        103003
                                                                       BCC
                                                                                   8$
                                                                                   PC, ERR4
                                                                                                           : 'INVALID NUMERIC VALUE'
                        004767
                                    000000G
      288
                                                                       JSR
            000514
                       000414
                                                                       BR
                                                                                   CHIX
      290
      291
                                                                       CHECK-FOR TABLE OVERFLOW, IF OVERFLOW, TERMINATE COMMAND.
      292
      293 000516 020227
                                                                                   R2.#BTOVER+<BTEND-BTRANS> ;END.OF.TABLE.REACHED
                                   000000C
                                                 BLO 18# ;NO, CONTINUE.

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      294 000522 103403
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TDATA-MACRO-M1110 27-MAR-80 15:36 PAGE-6-3. Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 :TABLE OVERFLOW :EXIT :ENTER WORD IN BT TABLE :LOCATE NEXT OVERRIDE WORD :PROCESS STRING :GET COMMAND LINE 295 000524 296 000530 PC,ERR17 CH1X 004767 000406 JSR. 000000G BR 016722 004767 103357 MOV. 000532 000000G 10\$: BINWD, (R2)+ 297 000532-298 000536-299 000544-301 302-303 000546 JSR -BCC -BR PC.FIND. 000000G -000751 5\$ ĆH1X: 304 000546 000167 000000G JMP. COMXX:

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TDATA:
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    306
    307
308
                                                        LIST.
    309
                                                        PERFORM SECOND LEVEL PARSING
                                                        EG. IN THE COMMAND: >LI IB 0
    310
    311
    312
                                                        PARSE - THE - " IB!
    314
315 000552
                                              LII::
                                                        JSR
                                                                                    :LOCATE · BUFFER · MNEMONIC · IN · COMMAND · LINE ·
    316
         000552
                  004767
                            000000G
                                                                 PC.FIND.
                                                                                    OK, CONTINUE
MISSING OPERAND
    317
         000556
                   103004
                                                        BCC:
                                                                 1$
    318 000560
319 000564
320
                                                                 PC.ERR3
                   004767
                            000000G
                                                        JSR
                  000167
                                                        JMP
                            999424
                                                                                    :FXIT-
                                                                 LHX
    321
                                                        MATCH: THE: MNEMONIC: FROM: THE: COMMAND: LINE: AGAINST: THE
    322
323
                                                        TABLE · OF · VALID · MNEMONICS .
    324
         000570
                  012700
                            000002
                                               1$:
                                                        MOV
                                                                 #LI1LN,R0
                                                                                    : NUMBER - OF - TABLE - ENTRIES -
                                                                 #LIITBL,R2.
PC,SCAN.
2$
    325
         000574
                   012702
                            000010
                                                        MOV.
                                                                                    ; POINT · TO · TABLE
                                                        JSR -
BCC -
    326
327
                                                                                    :MATCH - AGAINST - COMMAND - LINE
         авабаа
                  004767
                            000000G
                                                                                    : MATCH - WAS - MADE
         000604
                   103004
                   004767
                            000000G
                                                                                    ; 'INVALID MEMORY MNEMONIC'
         000606
    329
330
331
         000612-
                  000167
                            000376
                                                                 LIIX
                                                        SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE
                                                        SCAN-THE-COMMAND-LINE-FOR-THE-"START-LIST-ADDRESS"
    333
    334
                                                        THE START ADDRESS IS ZERO-RELATIVE:
     336
         000616
                   010167
                            000000G
                                               2$:
                                                        MOV-
                                                                 R1.RTNPT
                                                                                    :SAVE - POINTER
     337
         000622
                   004767
                            000000G
                                                        JSR
                                                                 PC.FIND
                                                                                    :LOCATE LIST START ADDR IN COMMAND LINE
                                                                                    OK, CONTINUE
     338
         999626
                   103004
                                                        BCC
                                                                  34
                            000000G
                                                        JSR
                                                                 PC, ERR3
         000630
                   004767
                                                                                    : 'MISSING OPERAND'
     339
                            000354
                                                        JMP
     340
         000634
                   000167
                                                                 LIIX
                                                                                    :EXIT
                                                        JSR
BCC
                                                                                    CONVERT COMMAND LINE VALUE TO BINARY
     341
         000640
                   004767
                            000000G
                                                                 PC, PACK
                                                                                    ;CONVERSION SUCCESSFUL . ; 'INVALID NUMERIC VALUE'
     342 - 000644
                   103004
                                                                  4$
                                                        JSR
                            000000G
                                                                 PC.ERR4
     343
         000646
                   004767
     344
                   000167
                                                        JMP
         000652
                            000336
                                                                 LIIX
     345
     346
                                                        JUMP TO THE ROUTINE TO LIST BUFFER CONTENTS:
     347
                                                        JSR.
                                                                                    :HOW-TO-STOP-PRINT
         000656
                            000000G
                                               4$:
                                                                 PC.HANG.
     348
                   004767
                   016701
                                                                                    : POINT TO ROUTINE
                                                        MOV
                                                                  RTNPT,R1
     349
         000662
                            000000G
                                                                  @(R1)
                                                                                    ;JUMP TO ROUTINE
         000666
                   000171
     351
     352
     353
                                                        INPUT BUFFER
     354
     355
                                                                                                                         ----
     356
                                                        CHECK-WHETHER-THERE-IS ANY-6-BIT BYTE-DATA IN-THE
     357
     358
                                               LIIB::
         000672
     359
                                                                                     :HAS. DATA COMMAND. BEEN. EXECUTED
     360 000672
                            000000G
                                                                  DATALN
                   005767
                                                                  20$
                                                                                    ;YES, CONTINUE
                                      JSR PC ERRS DATA COMMAND MUST PRECEED.
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                            000000G
    362.000700
                   004767
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LIIX
363
     000704
               000543
364
                                                         CHECK-WHETHER-THE-START-LIST-ADDRESS-IS-IN RANGE
                                              ;
365
366
                                                                                        ; IS LIST START ADDRESS IN RANGE
                                                                   BINWD, DATALN
                         000000G 000000G 20$:
                                                         CMP.
     000706
               026767
367
                                                                                        YES, CONTINUE
                                                         BLT.
                                                                   25$
PC,ERR9
               002403
368
     000714
                                                                                        :OUT-OF-RANGE
     000716
                          000000G
                                                         JSR -
               004767
369
                                                         BR
                                                                   LIIX
370
     000722
                                                         LIST FROM THE 8-BIT ASCII MIRROR TABLE, NOT FROM THE 6-BIT BYTE TABLE, SEE THE "DA" ROUTINE FOR NOTES ON THE CREATION OF THE MIRROR TABLE, THE FIELD BINWD"
372
373
374
                                                         CONTAINS THE LIST START ADDRESS.
375
376
                                                                    #DSAVE,R0
                                                                                        ; POINT TO ASCII VERSION OF "DATA
                                                         MOV-
                          000000G
                                               25$:
     000724
                012700
                                                                   BINUD, RØ
                                                                                        START LIST HERE:
CLEAR PRINT LINE CHAR COUNTER
                                                         ADD:
     000730
                066700
                          000000G
                                                         CLR
                                                                   R1
     000734
                005001
                                                                                        :R5 -> PRINT-LINE
                          000000G
                                                         MOV:
                                                                   #PRINT, R5
380 000736
                012705
 381
                                                         THE LOOP FLAG IS USED TO CONTROL THE LIST COMMAND.
ANY CHARACTER ENTERED FROM THE TERMINAL ENDS THE T
COMMAND AS DOES A Ø VALUE IN THE DATA TABLE.
 382
 383
 384
 385
                                                                                        :FINISHED ? .: YES, EXIT :END OF TABLE
                                                                    #LOOP,BASE
                          000000G.000000G.3$:
      999742
                832767
 386
      000750
                001521
                                                         BEQ.
                                                                    LIIX
 387
                                                                    (RØ)
                                                         TSTB
      000752
                105710
                                                                    30$
                                                                                        :NO. CONTINUE:
:PRINT-LAST-LINE
                                                         BNE
     000754
 389
                001003
     000756
                                                          JSR
                                                                    PC,CONSOL
                          000000G
                004767
 390
                                                                                        : AND EXIT
                                                         BR
                                                                    LHX
      000762
                000514
 39 i
 392
                                                         THE BINARY VALUES 15 (CARRAIGE RETURN) AND 12
 393
                                                          (LINE FEED) ARE PRINTED OUT AS <15> AND <12>.
 394
 395
                                                                                        :<CR> IN ASCII DATA:
:PROCESS <CR> OF <LF>
:ADD:TO:PRINT:LINE CHAR:COUNT
                                               30$:
                                                         CMPB
                                                                    #15,(R0)
      000764
                 122710
                           000015
 396
                                                                    4$
      000770
                 002006
                                                         BGE -
 397
                                                                    R1
                                                          INC
      000772
                 005201
                                                                                        :PRINT:LINE:FULL:
;YES, WRITE:TO:TT0
:MOVE:CHAR:TO:PRINT:LINE
                                                          CMP
                                                                    #72..R1
 399
      000774
                 R227R1
                           000110
                 002426
                                                         BLT.
                                                                    74
      001000
 488
                                                                    (R0)+,(R5)+
                 112025
                                                          MOVB
 40 i
      001002
                                                                                         :GET-NEXT-CHAR-
                                                          BR
                                                                    3$
      001004
                 000756
 493
                                                                                         :ADD FOR ANGLE BRACKETS
                                                                    #4.R1
                                                45:
                                                          ADD
      001006
                 062701
                           000004
 404
                                                                                         : ENOUGH - SPACE - ON - CURRENT - LINE
                                                                    #72..R1
 405
      001012
                 022701
                                                          CMP.
                                                                                         :NO. WRITE CURRENT LINE:
:MOVE LEFT BRACKET IN ANY CASE
                                                          BLT.
                                                                    7$
 406
      001016
                 002417
                                                          MOVB
                                                                    #!<,(R5)+
                           000074
 497
      001020
                 112725
                                                                    #11,(R5)+
#12,(R0)+
                                                                                         :MOVE ASCII 1 IN ANY CASE
                 112725
                                                          MOVB
 408
      001024
                                                          CMPB
                                                                                         :LINE FEED
 409
      001030
                 122720
                           000012
                                                          BEQ
                                                                                         ;YES, BUILD ASCII STRING
                 001403
112725
 410 001034
                                                                    #15,(R5)+
      001036
                                                          MOVB
 411
                                                                                         ;FINISH-WITH-RIGHT BRACKET
                                                          BR
                                                                    6$
                 aaa402
      001042
                                                          MOVB
                                                                     #12,(R5)+
                 112725
112725
                           999962
 413 001044
                                                                                         CLOSE BRACKETS
                                                          MOVB
                                                                    #1>,(R5)+
                           000076
 414 001050
                                                                    3$
 415
      001054
                 000732
 416
                                                          WRITE ONE LINE TO THE CONSOLE
 417
 418
                                                                                          :WRITE-LINE-TO-TT0
                                                          JSR-
               004767 000000G·
      001056
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 420 001062· 005001
                                                               CLR.
                                                                                                :CLEAR PRINT LINE CHAR COUNT
421 001064
                 312705
                            000000G
                                                              MOV.
                                                                          #PRINT,R5
                                                                                                ; RESET PRINT LINE POINTER
422-001070
                 000724
                                                                          3$
                                                                                                 :PRINT-NEXT-78 CHARS
424
425
                                                               BYTE · TRANSLATOR ·
426
427
428
                                                              CHECK-WHETHER-THE-TCH: COMMAND-HAS-BEEN-USED-TO CREATE-A-BYTE-TRANSLATOR-OVERRIDE-TABLE, LIST-CANNOT-BE-DONE-OTHERWISE.
429
 430
431
432-001072
                                                   LIBT::
433
     001072
                 032767
                            000000G-000000G
                                                              BIT.
                                                                          #RIDE,BASE
                                                                                                :HAS-BT-TABLE-BEEN OVERRIDEN
      001100
                 991993
                                                              BHE
                                                                                                YES, CONTINUE
YES, CONTINUE
YES, CHANGE COMMAND MUST PRECEED LIST
                                                                          1$
435
     001102
                 004767
                             000000G
                                                               JSR
                                                                          PC, ERR22
436
      001106
                 000442
                                                                         LIIX
                                                                                                :EXIT
437
                                                              CHECK-WHETHER THE START LIST ADDRESS IS IN RANGE. THE FIELD BINDS CONTAINS THE WORD OFFSET WHICH IS THE START ADDRESS. WILL BE USED TO GET THE START ADDRESS.
438
439
440
441
442
443 001110
444 001116
                 026727
                            000000G 000000C 1$:
                                                              CMP
                                                                         BINWD.#<BTEND-BTRANS> :IS-START ADDRESS-IN-RANGE-
2$ :YES. CONTINUE-
PC.ERR20 :START ADDRESS OUT OF RANGE HIGH:
                 103403
                                                              BLO.
445
     001120
                 004767
                            000000G
                                                              JSR
446
447
     001124
                 000433
                                                              BR
                                                                                                :EXIT
448
                                                              LIST-THE-OVERRIDE-TABLE.
449
                 012702
450 001126
                            000000G
                                                   2$:
                                                              MOV.
                                                                                                ;POINT TO BT OVERRIDE TABLE
                                                                         #BTOVER, R2.
451 001132
452 001136
                 016703
                            000000G
                                                                                                :LOAD · WORD · OFFSET · :SHIFT · FOR · BYTE · OFFSET
                                                              MOV-
                                                                         BINWD,R3
                 006303
                                                              AS_.
                                                                         R3
453
     001140
                 060302
                                                              ADD.
                                                                                                :START-LIST-HERE-
454
455
                                                              USE-THE-LOOP FLAG-TO-CONTROL-PRINTING:
ANY-CHARACTER-ENTERED-FROM-THE-CONSOLE-TERMINATES-
THE-COMMAND-AS-DOES-END-OF-DATA:
456
457
458
                            000000G
     001142
459
                                                                         #PRINT.R5 :POINT-TO-PRINT-LINE :#5,R3 :COUNT-NUMBER-OF-WORDS-IN-PRINT-LINE :
(R2)+,R1 :LOAD-WORD-FROM-BT OVERRIDE-TABLE :
PC.UNPK :CONVERT FOR-PRINTING :R2.#BTOVER+(BTEND-BTRANS) :END-OF-TABLE-REACHED :#5
                 012705
                                                   3$:
                                                              MOV.
                                                                         #PRINT, R5
     001146
                 012703
                            000005
                                                              MOV.
461
     001152
                 012201
                                                   4$:
                                                              MOV-
462.001154
                 004767
                                                              JSR
463
     001160
                 929227
                            000000C
                                                              CMP
464
     001164
                 103011
                                                              BHIS
                                                                                                ;YES, EXIT.
;SUB-FROM-PRINT-LINE-COUNT.
465 001166
                 005303
                                                              DEC:
                                                                         R3
466
     001170
001172
                 001370
                                                              BHF
                                                                         4$
                                                                                                CONVERT NEXT TABLE ENTRY
467
                004767
032767
                            000000G
                                                              JSR
                                                                         PC.CONSOL.
                                                                                                :PRINT-LINE-
468 001176
                            000000G-000000G-
                                                                                                :LOOP ON
:NO. EXIT
                                                              BIT
                                                                         #LOOP, BASE
469 001204
                 001403
                                                              BEQ
                                                                         LIIX
470 001206
                000755
                                                              BR
                                                                         3$
                                                                                                :START-WITH-FRESH-LINE
472.001210
                004767
                            000000G
                                                   54:
                                                              JSR -
                                                                         PC,CONSOL
                                                                                                :PRINT-LAST-LINE-
473
474
475 001214
                004767
                            имимия ..
                                                              JSR.
                                                                         PC.KILL.
                                                                                               ;KILL AST (IF THERE WAS ONE)
476 001220
                000167
                            авававас.
                                                              JMP
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TDATA -
                  478
                  479
                  480
                                                                                                                                                                                                                       END DATA
                  481
                  482
                                                                                                                                                                                                                        CHANGE THE NUMBER OF 6-BIT BYTE CHARACTERS TO BE TRANSFERRED TO THE TERM DETECTOR INPUT BUFFER. THE CONTENTS OF THE BUFFER REMAINED UNCHANGED.
                  483
                  484
                  485
                  486
                                                                                                                                                                                                                       NB. SINCE-THE-LOCAL-INPUT-BUFFER IS-TRANSFERRED-TO-THE-TERM-DETECTOR-IN-16-BIT-WORDS-AND-THERE-ARE-8-6-BIT-BYTES-IN-3-16-BIT-WORDS, THE-NUMBER-OF-6-BIT-BYTES-IN-THE-LOCAL-DATA-BUFFER-SHOULD-BE-DIVISIBLE-BYTES-IN-THE-LOCAL-DATA-BUFFER-SHOULD-BE-DIVISIBLE-BYTES-IN-THE-LOCAL-DATA-BUFFER-SHOULD-BE-DIVISIBLE-BYTES-IN-THE-LOCAL-DATA-BUFFER-SHOULD-BE-DIVISIBLE-BYTES-IN-THE-LOCAL-DATA-BUFFER-BHOULD-BE-DIVISIBLE-BYTES-IN-BUFFER-BHOULD-BE-DIVISIBLE-BYTES-IN-BUFFER-BHOULD-BE-DIVISIBLE-BYTES-IN-BUFFER-BHOULD-BE-DIVISIBLE-BYTES-IN-BUFFER-BHOULD-BE-DIVISIBLE-BYTES-BHOULD-BE-DIVISIBLE-BYTES-BHOULD-BE-DIVISIBLE-BYTES-BHOULD-BE-DIVISIBLE-BYTES-BHOULD-BE-DIVISIBLE-BYTES-BHOULD-BE-DIVISIBLE-BYTES-BHOULD-BE-DIVISIBLE-BYTES-BHOULD-BE-DIVISIBLE-BYTES-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BE-DIVISIBLE-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD-BHOULD
                  487
                  488
                  489
                  490
                  491
                                                                                                                                                                                                                        BY 8. NO CHECKING IS DONE, HOWEVER:
                  492
                  493
                  494 001224
                                                                                                                                                                                    EN1::
                  495
                                   001224
                                                                        004767
                                                                                                           000000G
                                                                                                                                                                                                                                                                                                                                     :LOCATE · END · VALUE · IN · COMMAND · LINE · NOTE 
                                                                                                                                                                                                                         JSR
                                                                                                                                                                                                                                                            PC,FIND
                  496
                                   001230
                                                                         103003
                                                                                                                                                                                                                         BCC.
                                                                                                                                                                                                                                                                                                                                     OK, CONTINUE
MISSING OPERAND:
                                                                                                                                                                                                                                                             3$
                  497
                                   001232
                                                                        004767
                                                                                                           000000G
                                                                                                                                                                                                                         JSR
                                                                                                                                                                                                                                                             PC,ERR3
                  498
                                   001236
                                                                        000425
                                                                                                                                                                                                                        ΒR
                                                                                                                                                                                                                                                                                                                                     ;EXIT
                                                                        004767
                                   001240
                                                                                                           000000G
                                                                                                                                                                                    3$:
                                                                                                                                                                                                                         JSR
                                                                                                                                                                                                                                                            PC.PACK.
                                                                                                                                                                                                                                                                                                                                     CONVERT COMMAND LINE VALUE TO BINARY
                  500 001244
                                                                         103003
                                                                                                                                                                                                                        BCC.
                                                                                                                                                                                                                                                            4$
                                                                                                                                                                                                                                                                                                                                     :CONVERSION SUCCESSFUL
                  501 001246
502-001252
                                                                        004767
                                                                                                            000000G
                                                                                                                                                                                                                         JSR
                                                                                                                                                                                                                                                            PC.ERR4
                                                                                                                                                                                                                                                                                                                                     : 'INVALID-NUMERIC-VALUE'
                                                                       000417
                  503
                  504
                                                                                                                                                                                                                        THE END VALUE CANNOT BE ZERO.
                                                                                                                                                                                    ;
                  505
                  506
                                  001254
                                                                       005767
                                                                                                           000000G
                                                                                                                                                                                    4$:
                                                                                                                                                                                                                                                            BINWD.
                                                                                                                                                                                                                                                                                                                                     : IS - END - VALUE - ZERO
                  507
                                   001260
                                                                       001003
                                                                                                                                                                                                                       BNE -
                                                                                                                                                                                                                                                            5$
                                                                                                                                                                                                                                                                                                                                     :NO. CONTINUE
                  508 001262
                                                                        004767
                                                                                                           000000G
                                                                                                                                                                                                                                                            PC, ERR4
                                                                                                                                                                                                                        JSR
                                                                                                                                                                                                                                                                                                                                     :REPORT · INVALID · VALUE ·
                  509
                                  001266
                                                                       000411
                                                                                                                                                                                                                                                            EN1X
                                                                                                                                                                                                                                                                                                                                     :AND EXIT
                 510
                                                                                                                                                                                                                       THE ''DATA' COMMAND MUST HAVE BEEN PREVIOUSLY EXECUTED.
IF IT HAS BEEN, REPLACE THE CONTENTS OF THE FIELD '
'DATALN' (LENGTH OF LOCAL DATA BUFFER) WITH THE END VALUE FROM THE COMMAND LINE.
                  511
                  512
                 513
514
515
                  516
                                   001270
                                                                       005767
                                                                                                           000000G
                                                                                                                                                                                    5$:
                                                                                                                                                                                                                         TST
                                                                                                                                                                                                                                                            DATALN
                                                                                                                                                                                                                                                                                                                                     ;HAS · 'DATA' COMMAND · BEEN · EXECUTED ·
                                  001274
                                                                       001003
                                                                                                                                                                                                                                                           6$
PC,ERR10
                                                                                                                                                                                                                       BNE
                                                                                                                                                                                                                                                                                                                                     ;YES, CONTINUE
                 518 001276
                                                                       004767
                                                                                                           000000G
                                                                                                                                                                                                                         JSR-
                                                                                                                                                                                                                                                                                                                                    :DATA COMMAND MUST PRECEED CENDS
                  519
                                  881382
                                                                       йййдйз
                  520
                                  001304
                                                                      016767
                                                                                                           000000G · 000000G · 6$:
                                                                                                                                                                                                                       MOV:
                                                                                                                                                                                                                                                            BINWD, DATALM.
                                                                                                                                                                                                                                                                                                                                    REPLACE LENGTH OF 'DATA'
                 521
                522 001312 523 001312 000167
                                                                                                           000000G
                                                                                                                                                                                                                         JMP
                                                                                                                                                                                                                                                             COMXX
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TDATA -
     526
     527
528
                                                                    DATA · FILES · ROUTINES ·
                                                                    READ EITHER THE TOATA BUFFER OR THE BYTE TRANSLATOR BUFFER FROM DISK.
PERFORM SECOND LEVEL PARSING
     530
     531
                                                                    EG. IN THE COMMAND:
     533
     534
535
                                                                    PARSE THE . " IB!
     536
     537
           001316
                                                         DF1::
     538
          001316
                      004767
                                  000000G
                                                                     JSR
                                                                                POLE IND.
                                                                                                       :FIND-A-BUFFER-MNEMONIC-IN-COMMAND-LINE-
     539
          001322
                      103004
                                                                    BCC
                                                                                1$
                                                                                                       :OK, CONTINUE
     540
           001324
                      004767
                                  000000G
                                                                     JSR
                                                                                PC,ERR3
                                                                                                       :'MISSING OPERAND'
     541
           001330
                      000167
                                  000514
                                                                    JMP.
     542
     543
                                                                    MATCH - THE - MNEMONIC - FROM - THE - COMMAND - LINE - AGAINST - THE
     544
                                                                     TABLE OF VALID MHEMONICS.
     545
     546
           001334
                      012700
                                  000002
                                                         1$:
                                                                    MOSS
                                                                                #DF1LN,R0
                                                                                                       :NUMBER - OF - TABLE - ENTRIES
     547
           001340
                      012702
                                  0000201
                                                                    MOV.
                                                                                                      :TABLE OF RESPONSES/RTH ADDRESSES
:CHECK COMMAND LINE AGAINST TABLE
                                                                                #DF1TBL,R2
     548
           001344
                      994767
                                  000000G
                                                                    JSR-
                                                                                PC, SCAN-
      549
           001350
                      103004
                                                                    BCC
                                                                                2$
                                                                                                      :OK, CONTINUE.
     550
           001352
                      004767
                                  000000G
                                                                               PC.ERR11
DF1X
                                                                    JSR.
                                                                                                       : 'INVALID FILE MNEMONIC'
     551
          001356
                      000167
                                  000466
                                                                    JMP.
     552.001362.
                      000171
                                  000000
                                                                                                      ;JUMP.TO ROUTINE.
                                                                                @(R1)
      553
     554
                                                                   LOAD. DATA: BUFFER FROM DISK.

THIS ROUTINE READS A DATA: FILE FROM DISKONE RECORD AT A TIME. IT. THEN CALLS A SUBROUTINE IN TMAIN WHICH PROCESSES THE LINE AND PLACES IT INTO TWO BUFFERS. ONE OF THE BUFFERS IS SIMPLY A MIRROR OF THE INPUT LINE INPUT TO BE USED FOR BUFFER WHICH WILL EVENTUALLY BE TRANSFERRED TO THE TERM DETECTOR INPUT BUFFER (SEE THE TRY AND TRU!
     555
     556
     558
     559
     560
     561
     562
563
                                                                                                                                                         565
                                                                    GLEAR·LOCAL·DATA·BUFFER·(BOTH·THE·6-BIT·BYTE·TABLE AND·THE·8-BIT·ASCII·MIRROR·TABLE).
     566
     567
     568 001366
                                                         DFIR::
     569 001366
                      005067
                                  000000G
                                                                    CLR
                                                                                COUNT:
                                                                                                       :CLEAR BIT SHIFT COUNTER
     570 001372
                      005067
                                  000000G
                                                                                                     CLEAR LENGTH OF DATA:

;CLEAR LENGTH OF DATA:

;POINT TO 6-BIT BYTE TABLE:

+1.R1 ;NUMBER OF WORDS IN TABLE:

;CLEAR DATA TABLE
                                                                    CLR
                                                                                DATALN.
     571 001376
                      012700
                                  000000G -
                                                                    MOV.
                                                                                #DTBL,R0
     572.001402
                      012701
                                  001000
                                                                    MOV-
                                                                                #<<1364.*3>/8.>
                                                                                                                                                  TRANSPORT
     573
          001406
                      005020
                                                         1$:
                                                                    CLR -
                                                                                (R0) +
                                                                                                      :CLEAR DATA TABLE :
     574 001410
575 001412
                      005301
                                                                                R1
                      001375
     576
     577
          001414
                      012700
                                  000000G
                                                                    MOM
                                                                                #DSAVE,R0
     578 001420
                      012701
                                                                                #1364./2.R1
                                  001252:
                                                                    MOV.
                                                                                                       ; NUMBER · OF · WORDS
     579 001424
                      005020
                                                         2$:
                                                                    CLR
                                                                                (R0)+
                                                                                                       :CLEAR TABLE
     580
          001426
                      005301
                                                                    DEC
     581 001430
                      003375
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TDATA:
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     582
     583
                                                             OPEN. THE FILE . "DATA. TXT"
     584
     585 001432
                   812784
                              PARABARS
                                                             MOV.
                                                                       #DTBL,R4
                                                                                           :R4 -> 6-BIT-BYTE-TABLE-
         001436
     586
                    012705
                              000000G
                                                             MOV
                                                                       #DSAVE, R5
                                                                                           :R5 -> 8-BIT-ASCII MIRROR-TABLE
     587
          001442
                                                                       #TXTFDB
                                                             OPEN$R
                              000000G
                    012700
          001442
                                                             MOV:
                                                                       #TXTFDB,R0
                              000000G .000000G
                                                             .IIF
          991446
                    112769
                                                                       NB, #FO.RD,
                                                                                           MOVB . #FO.RD, F. FACC(R0)
          001454
                    004767
                              000000G
                                                             ĴŜŔ
                                                                       PC. OPEN
     588
         001460
                    103005
                                                             BCC
                                                                       4$
     589 001462
                    004767
                              000000G
                                                             JSR.
                                                                       PC.ERR12
                                                                                           :ERROR - ON - OPEN -
     590
         001466
                    005067
                              000000G
                                                             CLR
                                                                       DATALN:
                                                                                           :AS-THOUGH-RTN-WAS NOT-ENTERED
     591
         001472
                    000566
                                                                       DF4X
     592
                                                             READ ONE RECORD. CALL ROUTINE IN TMAIN TO ADD ONE RECORD'S WORTH OF DATA TO THE LOCAL TABLE.
     593
594
     595
     596
          001474
                                                                       #TXTFDB
                                                                                           :READ . DATA: FILE.
                    012700
          001474
                              ининия в
                                                             MOV.
                                                                       #TXTFDB,R0
                    004767
          001500
                              000000G-
                                                             JSR
                                                                       PC..GET
     597
598
          001504
                     103414
                                                             BCS
                                                                       5$
                                                                                            :ERROR · OR · END · OF · FILE ·
          001506
                    016067
                              000000G - <mark>000000G</mark>
                                                             MOV
                                                                       F. NRBD(R0), GCMLEN.; LENGTH. OF LINE READ
     599
          001514
                              000000G-
                    012701
                                                             MOV
                                                                       #GCMBUF,R1
                                                                                           :POINT-TO-LINE
     600
          001520
                    004767
                              000000G
                                                             JSR
                                                                       PC.DBLD.
                                                                                           #BUILD 6-BIT BYTE TABLE 
#ERROR OR END OF TABLE 
#ACCUMULATE LENGTH
     601
          001524
                     103551
                                                             BCS
                                                                       DF1X
     602 001526
                    866767
                              000000G-000000G
                                                             ADD
                                                                       DPLUS, DATALN
     603
          001534
                    000757
                                                             BR
                                                                       4$
                                                                                            GET NEXT LINE
     604
          001536
001544
                     122760
     605
                              177766 -000000G-5$:
                                                             CMPB
                                                                       #-10.,F.ERR(R0)
                                                                                           :END.OF.FILE
                                                                                           ;YES, PUT-OUT-MESSAGE:
;YES, PUT-OUT-MESSAGE:
;AS-THOUGH-RTN-WAS NOT-ENTERED
;CLOSE-FILE-AND-EXIT-
                                                                       6$
PC,ERR13
                                                             BEQ.
     606
                    001405
     607
          001546
                    004767
                              000000G-
     608
          001552
                     005067
                              000000G
                                                             CLR
                                                                       DATALN:
     609
          001556
                    000402
                                                             BR
     610
     611
          001560
                     004767
                              000000G-
                                                                       PC, ENFILE.
                                                   6$:
                                                             JSR
          001564
                                                             CL0SE$
                                                                       #TXTFDB
     612
                                                   7$:
          001564
                    012700
004767
                              000000G
                                                             MOV.
                                                                       #TXTFDB,R0
          001570
                                                                       PC..CLOSE.
DF1X
                              000000G
                                                             JSR
          001574
     613
                    000525
                                                             BR
     614
     615
     616
617
                                                             LOAD-BYTE-TRANSLATOR BUFFER FROM DISK, READ-THE-FILE TRANSLATOR OVERRIDE TABLE, THE-FILE-ON-DISK MUST-BE-A FULL-64
     618
     619
     620
     621
                                                   DFBT::
                                                                                            :POINT:TO:BYTE:TRANS:TABLE:NUMBER:OF:WORDS:
     623
          001576
                    012700
                              000000G
                                                             MOV
                                                                       #BTOVER, RØ
     624 001602
625 001606
                                                             MOV-
                    012701
                              000100
                                                                       #64..R1
                    005020
                                                                       (RØ)+
                                                   1$:
                                                                                            :CLEAR · TABLE ·
     626
627
628
          001610
                    005301
                                                             DEC
                                                                       R1
          001612
                    003375
                                                                       1$
     629
                                                             OPEN-'TRANS.TXT'
     630
          001614
                                                             OPEN$R · #TRFDB
     63 i
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TDATA-
                0·M1110
                     012700
                               РИЧИРИЯ
                                                                         #TREDB.R0
                                                               .IIF
JSR.
          001620
                     112760
                               000000G - 000000G
                                                                         NB, #FO.RD,
                                                                                              MOVB . #FO.RD, F. FACC(R0)
          001626
                     894767
                               000000G
                                                                         PC. OPEN
     632
         001632
                     103003
                                                               BCC
                                                                         2$
     633
          001634
                     884767
                               000000G
                                                               JSR
                                                                         PC, ERR14
                                                                                              :ERROR · ON · OPEN ·
     634 001640
                     000503
                                                                         DF4X
     635
636
                                                               TOP-OF-LOOP. READ-FILE.
     637
     638
         001642
                     012702
                               000000G.
                                                    2$:
                                                               MOV
                                                                         #BTOVER,R2
                                                                                              :R2.-> BYTE.TRANS TABLE
         001646
001646
     639
                                                               GET$
                                                                         #TRFDB
                     012700
                               000000G
                                                               MOV.
                                                                         #TRFDB,R0
          001652
                     004767
                               000000G
                                                               JSR.
                                                                         PC..GET
     640
          001656
                     103021
                                                               BCC
                                                                         6$
                                                                                              ;OK, PROCESS RECORD
     641
          001660
                     122768
                               177766 000000G
                                                               CMPB
                                                                         #-10.,F.ERR(R0)
                                                                                             :END · OF · FILE ·
          001666
                     001403
                                                               BEO.
                                                                         285
                                                                                              :YES, EXIT
     643
          001670
                     004767
                               000000G
                                                                         PC, ERR 15
                                                               JSR.
                                                                                              :ERROR · ON · GET
     644
         001674
                     000447
                                                               BR
                                                                                              CLOSE FILE
                                                                         30$
     645
     646
                                                               EXIT:ON:SUCCESSFUL:FILLING:OF:TABLE:
     647
         001676
                               000000G · 000000G · 20$:
                                                                         #RIDE,BASE
PC,ENFILE
     648
                     052767
                                                               BIS
                                                                                              ;SET-FLAG-FOR-OVERRIDE-TABLE FILLED
     649
          001704
                     004767
                               000000G
                                                               JSR
                                                                                              :PRINT END-OF-FILE MESSAGE
     650
          001710
                                                                         #TRFDB
                                                               CLOSE$
          001710
001714
                     012700
                               000000G
                                                                         #TRFDB,R0
                                                               MOV
                     004767
                               ВВВВВВВВ
                                                               JSR
                                                                         PC..CLOSE
     651
652
          001720
                     000453
                                                               BR.
                                                                         DF4X
                                                                                              ; EXIT-
     653
                                                               PROCESS: ONE: RECORD: EACH: RECORD: MAY: CONTAIN: SEVERAL: TABLE VALUES: SEPARATED: BY: BLANKS: IN: ORDER: TO: PARSE: THEM EASILY MAKING: USE: OF: EXISTING SUBROUTINES; THE: RECORDS: ARE: READ:
     654
     655
     656
                                                               INTO THE COMMAND LINE BUFFER GCMBUF.
                                                                                                                                                   報道が行った(MA)の方
     658
          001722
                               000000G/000000G 6$:
                                                                         F.NRBD(RØ).GCMLEN:PRETEND:DISK:RECORD:IS:A:COMMAND:LINE:#GCMBUF.R1 ;POINT:TO:RECORD:READ:POINT:TO:RECORD:READ: :LOCATE:A:TABLE:VALUE:
                     016067
                                                               MOV
     659
         001730
                     012701
                               000000G
                                                               MOV
     660 001734
                     004767
                               РИРИРИЯ
                                                               JSR
     661 001740
                                                                                              ;OK, CONTINUE:
;EMPTY:INPUT:LINE:
;CLOSE:FILE:AND:EXIT
                     103003
                                                               BCC
                                                                         7$
          001742
     662
                     004767
                               000000G
                                                                         PC.ERR16
                                                               JSR.
     663 001746
                     000422
                                                               BR
                                                                         30$
     664
                                                                                              CONVERT NUMERIC VALUE FROM DISK RECORD
     665 001750
                     004767
                               BRARAGE.
                                                    7$:
                                                               ISP
                                                                         PC*PACK:
          001754
     666
                     103003
                                                               BCC.
                                                                                              OK, CONTINUE:
'INVALID: NUMERIC: VALUE
                                                                         8$
          001756
                     004767
                               000000G
                                                                         PC, ERR4
     667
                                                               JSR
     668 001762
                     000414
                                                                         30$
                                                                                              :CLOSE · FILE · AND · EXIT ·
     669
     670 001764
                     020227
                               авававас.
                                                               CMP
                                                    8$:
                                                                         R2.#BTOVER+<BTEND-BTRANS> ;END OF TABLE REACHED
     671 001770
                     103403
                                                               BLO
                                                                                              ;NO, CONTINUE:
;TABLE:OVERFLOW
;CLOSE:FILE:AND:EXIT
                                                                         10$
     672.001772
                     004767
                               000000G
                                                               JSR
                                                                         PC, ERR17
     673 001776
                     000406
                                                               BR
                                                                         30$
                                                                                             **ENTER WORD IN BT TABLE

**LOCATE NEXT TABLE VALUE

**PROCESS STRING

**NOTHING THERE FINISHED WITH THOS RECORD.
     674 002000
                               000000G
                                                    10$:
                     016722
                                                               MOV
                                                                         BINUD, (R2)+
     675
          002004
                     004767
                               000000G
                                                               JSR
                                                                         PC.FIND.
     676
         002010
                     103352
     677
          002012
                     000715
                                                               BR
                                                                         3$
     678
     679
                                                               EXIT.ON.ERROR. CLEAR.OVERRIDE.TABLE.AND.FLAG.
     688
     681 002014
                                           30$: CLOSE$ #TRFDB.
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002014 002020	012700 004767	000000G - 000000G -		MOV: JSR:	#TRFDB,R0 PC,.CLOSE	
682			;			
683 002024 684 002032 685 002036 686 002042 687 002044	042767 012700 012701 005020 005301	000000G 000000G 000000G 000400	35\$:	BIC: MOV: MOV: CLR: DEC:	#RIDE,BASE #BTOVER,R0 #256.,R1 (R0)+ R1	:CLEAR-BT-OVERRIDE FLAG :POINT TO-OVERRIDE TABLE :NUMBER-OF-WORDS-IN-TABLE :CLEAR-TABLE
688 002046	001375			BHE -	35\$	
689			;			
690 691 002050			DF1X:			
692-002050	000167	000000G ·		JMP.	COMXX:	

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TDATA -
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     694
      695
                                                                      IRHNSHER:
MOVE:LOCAL:DATA:TABLE:TO:TERM:DETECTOR:INPUT:BUFFER:
OR BYTE:TRANSLATOR:OVERRIDE:TABLE:TO:TERM:DETECTOR:
BYTE:TRANSLATOR:
PERFORM:SECOND:LEVEL:PARSING:
EG. IN:THE:COMMAND:
>TR:IB:
                                                                       TRANSFER
     696
     697
     698
      699
      700
      701
      702
      703
                                                                       PARSE - THE - 'IB'
      704
      705
      706
           002054
                                                           TR1::
           002054
002060
                       994767
                                                                       JSR
BCC
      797
                                   000000G
                                                                                   PC.FIND.
                                                                                                           :FIND THE BUFFER MHEMONIC IN COMMAND LINE
      708
                                                                                                           OK, CONTINUE
                        103003
                                                                                   1$
                                                                       JSR
                                                                                                           : 'MISSING OPERAND'
      709
           002062
                        004767
                                   000000G
                                                                                   PC,ERR3
      710 002066
711
712
713
714
                        000532
                                                                       MATCH: THE: MNEMONIC: IN: THE: COMMAND: LINE: AGAINST: THE:
                                                                       TABLE OF VALID MNEMONICS.
      715
           002070
                       012700
                                   000002
                                                           1$:
                                                                       MOV
                                                                                   #TR1LH,R0
                                                                                                          :NUMBER.OF.TABLE.ENTRIES:
:TALE.OF RESPONSES/RTN ADDRESSES
      716
           002074
                                                                                   #TR1TBL,R2
                        012702
                                   0000301
                                                                       MOV
                                                                       JSR
BCC
           002100
                                    000000G
                                                                                                           :MATCH · COMMAND · LINE · AGAINST · TABLE · - -
                        004767
                                                                                   PC.SCAN.
      718 002104
718 002104
719 002106
720 002112
721
                        103003
                                                                                   2$
                                                                                                           ;OK, CONTINUE.
                                    равараяс
                                                                                   PC, ERR18
                       004767
                                                                       JSR
                                                                                                           ; 'INVALID TABLE NAME!
           002112-
                       000520
                                                                       BR
                                                                                   TR4X
      722
723
724
                                                                       SAVE - THE - POINTER - TO - THE - ROUTINE - ASSOCIATED WITH - THE
                                                                       BUFFER, R1 -> ROUTINE ADDRESS,
CALL A ROUTINE TO SCAN THE COMMAND LINE FOR A LOOP
                                                                                                                                                            725
                                                                       INDICATOR. EG:
      726
      727
                                                                       LOOP.FLAG.WILL.BE.SET.IF.INDICATOR.IS.PRESENT.
      728
      729
                                                                       MOV.
            002114
                        010167
                                    000000G
                                                           2$:
                                                                                   R1.RTMPT
                                                                                                           :SAVE - POINTER - TO - ROUTINE
                                                                                   PC,LOOPR
RTHPT,R1
                                                                                                          ;LOOP ON TRANSFER :POINT TO RTH: ;JUMP TO ROUTINE
                                                                       JSR -
      730
            002120
                        004767
                                    000000G
      731
            002124
                        016701
                                    000000G
                                                            TRIN:
      732
733
            002130
                        000171
                                                                                   @(R1)
      734
735
                                                                       TRANSFER-FROM-LOCAL-DATA-BUFFER-TO-TERM-DETECTOR-INPUT-BUFFER, THE-FIELD-"DATALN" CONTAINS-THE NUMBER OF 6-BIT-BYTE-CHARACTERS-IN-THE-LOCAL-BUFFER, CONVERT-THIS-VALUE-INTO-A-NUMBER PDP-11 WORDS-FOR-CONTROLLING-THE-TRANSFER
      736
      737
738
                                                                       THE TRANSFER.
       749
      741
      742
            002134
                                                            TRIB::
       743
            002134
                        012767
                                                                       MOV
                                                                                   #0.TD$SW
                                                                                                           :RESET-TD
                                                                                                           SIMULATE DISK INPUT
NUMBER OF 6-BIT BYTES
MULT BY 2
                       012767
016701
                                                                                   #T$DISK,TD$CTW
DATALN,R1
      744 002142
                                    000200
                                              176360
                                                                       MOV
      745
           002150
                                    000000G
                                                                       MOV.
            002154
                        006301
                                                                       ASL
                                                                                                           :NUMBER:OF:6-BIT:BYTES:
:RESULT:=:NUMBER:OF:BYTES:X:3
:NOW:DIVIDE:BY:8.
      747
           002156
                        016702
                                   000000G
                                                                       MOV
                                                                                   DATALH, R2
      748 002162
749 002164
                        060201
                                                                       ADD
                                                                                   R2.R1
                        006201
                                                                                   R1
                                                                       ASR
                                                 ASR R1 :FOR NUMBER Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
           002166
                        006201
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TDATA.
                                                            ASR
                                                                                         :OF·WORDS
         002170
                   006201
                                                                     ILOW, MSTR2
                                                                                         ; IB START ADDRESS
         002172
                   016767
                             000000G · 000000G ·
                                                            MOV.
    753
754
755
                                                                                         ;R2.-> 6-BIT.BYTE.TABLE
         002200
                   012702
                             000000G
                                                            MOV
                                                                     #DTBL,R2
                                                            TRANSFER THE TABLE
     756
                                                                                         :POINT TO IB
                                                                     MSTR2,R3
(R2)+,(R3)
     757
         002204
                    016703
                             000000G
                                                  1$:
                                                            MOV
         002210
     758
                    012213
                                                            MOV
                                                                                         :LOAD - IB
                                                                      #2,MSTR2
     759
         002212
                    062767
                              000002
                                       000000G
                                                            \mathtt{ADD}
                                                                                          :ADVANCE ADDRESS
     760
         002220
002222
                   005301
                                                            DEC.
                                                                     R1
     761
                    003370
                                                            BGT
                                                                      1$
     762
                                                                                         :TEST-LOOP-FLAG
     763
     764
     765
766
                                                            TRANSFER - BYTE - TRANSLATOR - TABLE - TO - TD -
     767
                                                            IF A-BYTE-TRANSLATOR-OVERRIDE-TABLE-HAS-BEEN_BUILT. (SEE THE 'CH' AND 'DF' COMMANDS), THEN TRANSFER IT. TO THE TERM DETECTOR. OTHERWISE TRANSFER THE DEFAULT
     768
     769
     770
771
                                                            BYTE-TRANSLATOR-TABLE, IN-EITHER CASE-TRANSFER-THE SAME-TABLE-FOUR-TIMES.
     772
     773
          002226
                                                  TRBT::
     775
         002226
                    012767
                              000000: 176376
                                                            MOV
                                                                      #0.TD$SW∙
                                                                                          :RESET-TD
     776
777
         002234
002240
                    012702
                              000004
                                                            MOV.
                                                                      #4.R2
                                                                                          :TRANSFER SAME TABLE 4 TIMES
                                                                                         :LOAD START ADDRESS:
:NUMBER OF WORDS IN TABLE
:IS OVERRIDE TABLE IN USE
                              000000G-000000G
                                                                      TLOW, MSTR2
                    016767
                                                            MOM
     778
         002246
                    012700
                              000100
                                                            MOV
                                                                      #64..R0
          002252
                    032767
                              000000G · 000000G
                                                            BIT
                                                                      #RIDE, BASE
     780
         002260
                    001403
                                                            BEQ
                                                            MOV
BR
     781
          002262
                    R127R1
                              000000G
                                                                      #BTOVER,R1
                                                                                          ; POINT TO OVERRIDE TABLE
          002266
                    000402
     782
                                                                      3$
                                                                                          :R1 -> BYTE TRANS TABLE
     783
          002270
                    012701
                              000000G
                                                            MOV
                                                                      #BTRANS.R1
          002274
                    012767
                              000040 176360
                                                                                         :SET : INTERFACE : AND CONTROL
                                                            MOV
                                                                      #T$ICD, TD$CTW
     785
          002302
                    012767
                              000030 -176362
                                                            MOV.
                                                                      #T$BTAR,TD$TAW
                                                                                         ;SELECT BYTE TRANS MAR
                    016767
012767
012167
     786
          002310
                              000000G-176364
                                                            MOV:
                                                                      MSTR2.TD$TDW
     787
          002316
                              000020 176362
                                                            MOV
                                                                      #T$BT,TD$TAW
                                                                                          ; SELECT BYTE TRANS MEMORY
     788
          002324
                              176364
                                                            MOV
                                                                      (R1)+.TD$TDW
                    005267
005300
003361
          002330
                              000000G
                                                            INC
DEC
                                                                      MSTR2
                                                                                          ; ADVANCE ADDRESS
         002334
002336
002340
     79A
                                                                      RØ
     791
                                                            BGT
                                                                      4$
                    005302
                                                            DEC
                                                                      R2.
                                                                                          :SUB-FROM-OUTER-LOOP-COUNT
     793 002342
                    001341
     794
     795
          002344
          002344
                              000000G · 000000G
                                                            BIT
                                                                      #LOOP, BASE
                                                                                          :LOOP ON TRANSFER
     797
          002352
                    001264
                                                            BNE
                                                                      TRIH
                                                                                          :YES, REPEAT
     798
     799
          002354
                                                  TR1X:
     800 002354
                    004767
                              000000G
                                                            JSR
                                                                                          ;KILL AN AST (IF THERE WAS ONE)
     801 002360
                    000167
                              000000G
                                                            JMP.
                                                                      COMXX:
     802
     803
                    000001
                                                            .END
                                                                                                                                 ANNARY PUBLISHED A
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TA Approved For Release 2005/07/12 IA-RDP85-00514R00020002000 3
SYMBOL TA
ALUCKE = - 040000
                                    BYTE38=-000046
                                                                        BYTE9 = 000011
                                                                                                            FN1X-
                                                                                                                       001312R
                                                                                                                                          002·N·
                                                                                                                                                        = 000144
                                                                        BYTE90=-000011
BYTE90=-000132
BYTE91=-000133
                                                                                                           ERR10 = ******** GX*
ERR11 = ******* GX*
ERR12 = ******* GX*
BYTE39= 000047
BYTE4 = 000004
                                                                                                                                                OFFSET= · *******
                                                                                                                                               OFF6 = ******* GX*
PACK = ******* GX*
                                    BYTE40 = . 000050
BYTE41 = . 000051
BYTE42 = . 000052
                                                                        BYTE92=-000134
BYTE93= 000135
BYTE94= 000136
                                                                                                            ERR13 = ******* GX
                                                                                                                                                PAR$$$=:000027
                                                                                                                                               ERR14 = · ******* GX
                                    BYTE43= 0000053
                                                                        BYTE95= 000137
                                                                                                            ERR15 = ******* GX
                                    BYTE44= 000054
BYTE45= 000055
                                                                        BYTE96=-000140
BYTE97=-000141
                                                                                                            ERR16 = · ***** GX
                                                                                                            ERR17 = ****** GX
BIT10 = 002000
BIT11 = 004000
                                    BYTE46= 000056
                                                                        BYTE98 = 000142
                                                                                                            ERR18 = · ****** GX
                                    BYTE48= 000057
BYTE48= 000060
BYTE49= 000061
BYTE5 = 000005
BIT12 - 010000
                                                                        BYTE99= 000143
                                                                                                            ERR20 = · ******** GX-
BIT13 = 020000
BIT14 = 040000
                                                                        BYTVAL = . 000144
                                                                                                            ERR22 -- ****** GX
                                                                        CBKALL = . 001000
                                                                                                           ERR3 = · ****** GX · ERR4 = · ******* GX ·
                                                                                                                                                QR$CR2= · 176422
QR$LBR= · 176424
BIT15 = 100000
                                                                        CBKCLK = - 000400
                                                                                                                                                Q$ATTN=.000100
Q$BCL.=.000001
Q$CCCP=.000040
BIT2 = 000004
                                    BYTE50=-000062
                                                                                    000376RG
                                                                                                      002 · ERR6
                                                                                                                     = экжжжж БХ
                                    BYTE51 = 000063
BYTE52 = 000064
        = · 000010
= · 000020
                                                                        CHIB-
                                                                                    000260RG
                                                                                                      002 - ERR7.
                                                                                                                     = · ****** GX = · ****** GX
                                                                        CHLEN = ****** GX
CH1 000150RG
RIT4
                                                                                                            FRRR
         = 000040
                                    BYTE53= 000065
                                                                                    000150RG
BIT5
                                                                                                      002 · ERR9
                                                                                                                     = ******** GX
                                                                                                                                                Q$CHB - = - 000400
                                                                                                     002 F.ERR9 = *********** GX**

**FIND = ************ GX**

**002 F.ERR = ********** GX**

******************* GX**

**F.FACC = *********** GX**
         = · 000100
= · 000200
                                    BYTE54= 000066
BYTE55= 000067
                                                                        CH1LN - - 000002 - G
                                                                                                                                                Q$CHRL= 000200
                                                                                                                                                Q$CLR - = 000040
Q$CNC - = 030000
Q$CP = 000060
BITZ
                                                                        CH1TBL 000000RG
CH1X 000546R
BIT8
         = 000400
                                    BYTE56= 000070
BIT9 = 001000
BTEND = ******** GX
                                    BYTE57=-000071
BYTE58=-000072-
                                                                         CHOBRE = 100000
                                                                        COMXX = ******** GX-
CONSOL = ******* GX-
COUNT = ******* GX-
                                                                                                                                                Q$CPCC=-000010
                                                                                                            F.NRBD= ******** GX
                                    BYTE59= 000073
 BTOVER= ****** GX-
                                                                                                            GCMBUF = · ****** GX
                                                                                                                                                Q$CP2. = . 000260
Q$CSC. = . 010000
 BTRANS= ****** GX
                                    BYTE6 = 000006
                                                                                                            GCMLEN= ********* GX
BYTE0 = 0000000
BYTE1 = 000001
                                    BYTE60= 000074
                                                                        CPCCEN= 010000
                                                                                                            GCONLY= ****** GX
                                                                                                                                                Q$CSEL = . 000360
                                                                                                                                                Q$CSET= 000002
Q$CSP = 020000
Q$DMA = 000001
                                    BYTE61= 000075
                                                                        CPREAD = 040000
CPWRTE = 020000
                                                                                                            HANG - ********* GX
ILOW - ******** GX
 BYTE10= 000012
                                    BYTE62=-000076
                                                                                                            KILL = ******* GX
LIBT 001072RG
BYTE11=-000013
BYTE12=-000014
                                    BYTE63= 000077
                                                                        CSADRD = . 000004
                                                                        CSEQCI = 100000
CSOE - 000040
                                    BYTE64= 000100
BYTE65= 000101
                                                                                                                                          002 · Q$ENBK = · 040000
 BYTE13= 000015
                                                                                                            LIIB.
                                                                                                                        000672RG
                                                                                                                                          002.Q$ENOP=.020000
                                                                        CSURTE = 000100
DATA 000114R
                                                                                                                                         002 0$FR0 = 004000

0$FC = 000045

002 0$F0 = 000044

002 0$FP = 000002 0
 BYTE14= 000016
                                    BYTE66= 000102
                                                                                                            1 T 1
                                                                                                                       000552RG
 BYTE15= 000017
BYTE16= 000020
BYTE17= 000021
                                    BYTE67 = . 000103
                                                                                                      002 · LI1LH · = · 000002 · G
                                                                        DATALN= ***** GX
                                    BYTE68=-000104
                                                                                                            LIITBL 000010RG
                                    BYTE69= 000105
BYTE7 = 000007
BYTE70= 000106
                                                                                                      002-LI1X- 001214
002-LOC.EN=-000100
LOC.WA=-040000
                                                                        DA1
                                                                                    000040RG
                                                                                                                       001214R
 BYTE18= 000022
                                                                        DA1X-
                                                                                    000144R
 BYTE19= 000023
                                                                        DBLD: = ***** GX:
                                                                                                                                                Q$ICP = 000006
 BYTE2 - = . 000002
BYTE20 = . 000024
                                    BYTE71= 000107
BYTE72= 000110
                                                                        DBR.RD= 000001
DB$CPP= 001457
                                                                                                            Q$IHB -- 000003
                                                                                                                                                Q$IHRL=:000002
 BYTE21 = . 000025
                                    BYTE73= 000111
                                                                        DB$SPT= 000026
                                                                                                                                                Q$IMRP= 000007
 BYTE22= 000026
BYTE23= 000027
                                    BYTE74= 000112
BYTE75= 000113
                                                                        DB$TPC= 000023
                                                                                                            MAREN1 = 000001
                                                                                                                                                Q$LBD - = . 001000
                                                                        DFBT:
DFIR:
                                                                                                      002 · MAREN2 = · 004000
002 · MARLOD = · 010000
002 · MAROUT = · 000002
                                                                                   001576RG
001366RG
                                                                                                                                                Q$LBDP= 001001
                                                                        DF IB
                                    BYTE76= 000114
 BYTE24= 000030
 BYTE25= 000031
                                    BYTE77= 000115
                                                                                                                                                Q$LDCD=.000003
                                                                                    001316RG
                                                                        DF1LN - = - 0000002 - G
 BYTE26= 000032
BYTE27= 000033
                                                                                                                                                Q$LDMD= 000004
                                    BYTE78=:000116
                                                                                                            MAR.LO= 002000
                                                                                                      002 MAR.OU= 000040
002 MBKALL= 001000
MBKCLK= 000400
                                    BYTE79= 000117
BYTE8 = 000010
                                                                        DF1TBL 000020RG
                                                                                                                                                Q$LDPP=-002000
                                                                                                                                                Q$LHP - 010000
Q$MNC - 140000
Q$MR - 000052
Q$MRP - 00040
 BYTE28= 000034
                                                                        DF1X-
                                                                                    992959R
 BYTE29= 000035
                                    BYTE80= 000120
                                                                        DISPGS = 100000
                                                                         DMAAWR= 000005
 BYTE3 = 000003
                                    BYTE81= 000121
                                                                                                            MMADRD = . 000100
 BYTE30= 000036
BYTE31= 000037
                                    BYTE82= 000122
BYTE83= 000123
                                                                                                            MMLEFT= 0000002
MMOE = 000004
                                                                        DMARRD = . 000003
                                                                        DMARWR = . 000004
                                                                                                                                                0$MRP2=_$000240
0$MSC = $040000 **
0$MSET= 0000004 ->
                                                                                                            MMWRTE = 000000
MNOBRE = 100000
 BYTE32= 000040
                                    BYTE84= 000124
                                                                         DPLUS = ******* GX
 BYTE33= 000041
                                    BYTE85= 000125
                                                                         DSAVE. = · ******** GX-
 BYTF34= 000042
                                    BYTE86= : 000126
                                                                        MREN1 = 000001
MREN2 = 020000
                                                                                                                                                Q$MSP·=·100000
Q$NCLK=·176000
Q$PP =·000100
 BYTE35=-000043
                                    BYTE87 = . 000127
                                                                                                      MSTR2 = ******* GX 002 MSYN = *000040
                                                                        ENFILE= ******** GX*
EN! 001224RG
 BYTE36= 000044
                                    BYTE88= .000130
BYTE37= 000045
                                    BYTE89= 000131
                                                                                                                                                Q$PPSW= 000320
                                                 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
```

TDOTO.

```
MACRO-M1110 27-MAR-80 15:36 PAGE-10-3
                                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
                                                                                                                                                                          WORD69= 000212
WORD7 = 000016
WORD70= 000214
WORD71= 000216
WORD72= 000220
                                                                                      T$RBD0=-000200
                                                                                                                                WORD32=-000100
                                           TD$TDW= · 176364
Q$QHLT=.000013
Q$QL. =.000043
Q$QLA.=.000053
                                                                              T$RNB = 000040
002 T$RSET= 040000
                                                                                                                                WORD33=-000102
WORD34=-000104
WORD35=-000106
                                           TLOW.
                                                     = · ***** GX ·
                                                        002226RG
                                           TRBT -
                                           TRFDB
                                                         жжжжжж GX
                                                                                      T$SC - 000022
                                                                              002 · T$SCLK = · 020000
002 · T$SEG1 = · 000000
002 · T$SEG2 = · 000001
Q$QLB·=·000054
Q$QLR·=·000001
Q$QU·=·000042
                                                         002134RG
                                                                                                                                WORD36=-000110
                                                                                                                                                                          WORD72=-090220
WORD73=-000222
WORD74=-000224
WORD75=-000226
WORD76=-000230
                                                                                                                                WORD37= 000112
WORD38= 000114
                                           TRIN
                                                         002124R
                                                         002344R
                                           TRUP
Q$RDCD=-000005
                                                         002054RG
                                                                              002 · T$SEG3 = · 000002
                                                                                                                                WORD39= 000116
Q$RDCD=-000000
Q$RDMD=-0000006
Q$REBK=-001000
Q$RNC-=-006000
Q$RSC-=-004000
                                                                              T$SO - = 000001
002 - T$UBUS = 100000
002 - T$1CLK = 000400
                                           TR1LN - = - 0000002 - G
                                                                                                                                WORD4 = 000010
                                                                                                                                                                          WORD77=-000232

WORD78=-000234 -- →-

WORD79=-000236

WORD8=-000020
                                                                                                                                WORD40=.000120
WORD41=.000122.
WORD42=.000124
                                           TRITBL 000030RG
                                                         002354R
                                           TR1X-
                                           TXTFDB=·***** GX
                                                                                      T$8BEN= 000020
                                           T$AD - = 000020
T$BA - = 000002
Q$RSET=:000010
                                                                                      UBD.IN= 000020
                                                                                                                                WORD43=-000126
Q$SM· = 100000
Q$SP· = 000120
                                                                                      UNPK: =: ******* GX: WORD0 =: 000000 UORD1 =: 000002:
                                                                                                                                WORD44=-000130
                                                                                                                                                                           WORD80= 000240
                                           T$BD - - 000010
                                                                                                                                WORD45= 000132
WORD46= 000134
WORD47= 000136
                                                                                                                                                                           WORD81=-000242
WORD82=-000244
Q$SP2 · = · 000340
                                           T$BSO - = - 100000
RGQ.EN= 000200
                                           T$BT = 000020
                                                                                      WORD10= 000024
                                                                                                                                                                           WORD83= 000246
RGQ.VA=-020000
RIDE =-******* GX-
RTMPT =-******* GX-
                                           T$BTAR=.000030
T$BTD =.002000
T$CD =.000100
                                                                                      WORD11=-000026
WORD12=-000030
WORD13=-000032-
                                                                                                                                                                           WORD84= 000258 7
                                                                                                                                WORD48= 000140
                                                                                                                                                                           WORD85= 000252
WORD86= 000254
WORD87= 000256
                                                                                                                                WORD49=-000142
WORD5 =-000012
 SCAN: =:****** GX
                                           T$CLK - = - 002000
                                                                                      WORD14= 000034
                                                                                                                                WORD50= 000144
                                           T$DISK= 002000
T$DISK= 000200
T$DRD = 000004
T$EMEM= 010000
T$FSAA= 000000
 5EQ.CI= 000010
                                                                                      WORD15=-000036
                                                                                                                                WORD51= 000146
                                                                                                                                                                           WORD88 = . 000260
$$CLR·=·000000
$$LA·=·000001
$$QB·=·000005
                                                                                      WORD16= 000040
WORD17= 000042
                                                                                                                                WORD52=-000150
                                                                                                                                                                           WORD89= 000262
                                                                                                                                WORD53=-000152
WORD54=-000154
WORD55=-000156
                                                                                                                                                                           WORD9 = 0000022
                                                                                      WORD18= 000044
                                                                                                                                                                           WORD90=-000264
WORD91=-000266
                                            T$FSAB= 000004
                                                                                      WORD19= 000046
$$QX: =:000004
$$$R: =:000007
                                            T$FSAC=-000014
                                                                                      WORD2 - - 000004
                                                                                                                                WORD56= 000160
                                                                                                                                                                           WORD92= 000270
                                                                                                                                WURD56= 000162

WURD57= 000162

WURD58= 000166

WURD59= 000166

WURD6 = 0000170

WURD60= 000170

WURD61= 000172

WURD62= 000174

WURD63= 000176

WURD64= 000200

WURD64= 000200
                                                                                      WORD20=-000050
WORD21=-000052
WORD22=-000054
                                           T$F$B2=-000010
T$IB- =-000026
                                                                                                                                                                           WORD93 = . 000272
         = 0000010
 S$S1
                                                                                                                                                                           WORD94= 000274
WORD95= 000276
 S$S2· = 0000014
TD$CTR= 176370
TD$CTW= 176360
                                            T$IBAR= 000024
                                           T$IBE -- 020000
T$IBF -- 040000
                                                                                      WORD23=-000056
WORD24=-000060
                                                                                                                                                                           WORD96= 000300
                                                                                                                                                                           WORD97=.000302
 TD$INL= 004000
                                            T$ICD - = 000040
                                                                                      WORD25= 000062
                                                                                                                                                                           LIORDAR - GRAZA4
 TD$MEM= 000270
TD$OAR= 176344
                                                                                      WORD26= 0000064
WORD27= 000066
WORD28= 000070
                                            T$MODE = . 004000
                                                                                                                                                                           WORD99= 000306
                                           T$0B · = · 000036
T$0BE · = · 004000
                                                                                                                                                                           WRDVAL = . 000310
 TD$0TR=-176346
                                                                                                                                                                           XTREAD = 001000
XTWRTE = 000400
                                                                                                                                WORD65=-000202
WORD66=-000204
 TD$QRD= 000274
                                            T$0BF·=·010000
                                                                                      WORD29= 000072
                                           T$0BRA= 4000034
T$0BWA= 4000032
                                                                                                                                                                            .CLOSE= *****
 TD$SW-=-176376
                                                                                      WORD3 = 000006
WORD30= 000074
 TD$TAR=:176372
                                                                                                                                WORD67=.000206
WORD68=.000210
                                                                                                                                                                                     = · жжжжжж
                                            T$0UTA = - 100000
                                                                                      WORD31 = . 000076
 TD$TAW=-176362
                                                                                                                                                                            .OPEN = ***** G
 TD$TDR=:176374
  . ABS:
               000000
                                  ааа
               000000
                                   001
 TDATA
               002364
                                   002
 ERRORS DETECTEL:
                                 0
VIRTUAL MEMORY USED: 4595 WORDS (18 P
DYNAMIC MEMORY: 5972 WORDS (22 PAGES)
ELAPSED TIME: 00:01:01
IDATA TDATA SPEC20.13IM C20.13TDATA
                                                            ( · 18 PAGES)
```

The state of the s

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MACRO N.: 110 27-MAR-80 15:40 PAGE 5 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                             .FITLE . FRUN
                                                             .PSECT: TRUM
   000000
23456789
                                                             .LIST
                                                                       MEB
                                                                                                     TERM DETECTOR 'MANUAL' DEBUGGING AIDS
                                                  ;
                                                             RUN - COMMANDS
                                                             COMMANDS:
                                                                        RUN TERM DETECTOR
i0
11
12
                                                             ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE TMAIN, AT LOCATION COMMEN
13
14
15
16
                                                  RUITBL::
17
    000000
000000
                                                              .ASCII
                                                                         /SC/
                                                                                               ;SINGLE - CLOCK -
18
19
                    123
                                103
    000002
                0000707
                                                              .WORD
                                                                         RUSC
               121
000124
20122345678901233456789
    000004
                                120
                                                              .ascli
                                                                         20P2
                                                                                               ; READ · OUTPUT · TO · QR AND · PRINT
                                                                         RÜQP
                                                              .WORD
    000006
    000010
                                                              .ASCII
                                                                         ZQNZ
                                                                                               :READ OUTPUT TO QR (NO PRINT)
                    121
                                116
                                                                         RUQN
                                                             .WORD
    000012
                0001341
                                                                         /NC/
                                                                                                :NORMAL CONTINUOUS CLOCK
                                103
    000014
                    116
    000016
                000 i 44'
                                                              .WORD
                                                                         RUNC
                000004
                                                  RU1LH
                                                                         <.-RU1TBL>/4
                                                                                                           1.4
                                                                                                     21.00
                                                             PERFORM SECOND LEVEL PARSING-
EG. IN THE COMMAND:
>RU NC
PARSE THE 'NC'
     000020
                                                  RU1::
                                                                                                ;FIND AN OPERAND IN COMMAND LINE ;OK, CONTINUE
                                                              JSR
                                                                         PC FIND
     000020
                004767
                           000000G
                103004
                                                              BCC
                                                                         1$
    000024
000026
                004767
                                                                         PC, ERR3
                                                                                                ;'MISSING OPERAND'
                           000000G
                                                              JSR
     000032
                000167
                           000532
                                                              JMP
40
                                                             \mathsf{MATCH} : \mathsf{THE} : \mathsf{OPERAND} : \mathsf{FROM} : \mathsf{THE} : \mathsf{COMMAND} : \mathsf{LINE} : \mathsf{AGAINST} : \mathsf{A} : \mathsf{TABLE} : \mathsf{OF} : \mathsf{VALID} : \mathsf{OPERANDS} :
41
42
43
                                                             MOV:
                                                                                                :NUMBER:OF:TABLE:ENTRIES:
:TABLE:OF:RESPONSES/RTN:ADDRESSES
44
     000036
                012700
                            000004
                                                   1$:
                                                                         #RU1LN,R0
                           0000000°
                012702
004767
                                                                         #RU1TBL,R2
45
     000042
                                                              JSR
                                                                         PC.SCAN
                                                                                                : MATCH - COMMAND - LINE - AGAINST - TABLE?
46
47
     000046
     000052
                103004
                                                              BCC
                                                                         2$
                                                                                                OK, CONTINUE
                                                                         PC,ERR18
RUIX
                                                                                                : "INVALID: TABLE: NAME!
                004767
                            000000G
                                                              JSR
JMP
49
50
51
53
54
55
56
57
     000060
                000167
                           000504
                                                              R1 -> ADDRESS.OF.ROUTINE.TO.BE.EXECUTED.
     000064 000171 000000
                                                   2$:
                                                              RUN-WITH-A-SINGLE-CLOCK-
```

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TRUN-

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TRUN-
                              27-MAR-80 15:40 PAGE 5-1
Approved For Release 2005/07/11 IA-RDP85-00514R000200020001-3
                 O-M1110
       58
                                                                       SALL A ROUTINE TO SCAN THE COMMAND LINE FOR A LOOP INDICATOR. EG:
       59
       60
                                                                       >RU-SC-L-
       61
                                                                       LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT-
       62
       63
           000070
                                                           RUSC::
                       004767
       65
           000070
                                   000000G
                                                                       JSR
                                                                                   PC.LOOPR
                                                                                                          :LOOP ON CLOCK ?
       66
           000074
                       012767
                                   000000
                                               176376
                                                                       MOV
                                                                                   #0.TD$SW
                                                                                                          :RESET TD
           000102
       67
                       012767
                                   024000
                                               176360
                                                                                   #<T$SCLK+T$MODE>,TD$CTW-
#LOOP.BASE- ;LOOP.FLAG.ON.?
                                                                       MOV
           000110
                       032767
                                   000000G · 000000G
       69
           000116
                       001371
                                                                       BNE
                                                                                   1$
       70
71
72
                                                                                                          :YES, REPEAT.
           000126
                       000167
                                   000444
                                                                       JMP
                                                                                   RU1X
       73
74
                                                                       RUN-NORMAL
                                                                       READ · TD · OUTPUT · TO · QR · AND · PR INT
       76
77
           000124
000124
                                                           RUQP::
                       052767
                                   000000G · 000000G
                                                                       BIS
                                                                                   #QP,BASE
                                                                                                          :SET-FLAG-FOR-PRINT-
:RUN-NORMAL-
       29
       80
       81
       82
                                                                       RUN - NORMAL
      83
84
                                                                       READ . TD . OUTPUT . TO . QR . (NO . PRINT)
       85
       86
           000134
                                                          RUQN::
       87
           000134
                       052767
                                  000000G · 000000G
                                                                                   #QN,BASE
                                                                      BIS.
                                                                                                          :SET-FLAG-FOR-NO-PRINT-
       88
           000142
                       ййй4йй
                                                                                  RUNC
       89
      90
91
92
93
                                                                       RUN - NORMAL
                                                                      ISSUE 010 FOR UNSOLICITED INTERRUPT FROM TERMINAL (THE LOOP FLAG WILL BE SET). THE LOOP FLAG WILL ALLOW CONTINUOUS RUNNING OF THE TERM DETECTOR UNTIL A CHARACTER IS ENTERED FROM THE TERMINAL:
      95
96
       97
                                                                      LOAD-BYTE-TRANSLATOR, IF-A-BYTE-TRANSLATOR OVERRIDE-TBALE-HAS-BEEN-BUILT-(SEE-THE-1CH1 AND-1DF1 COMMANDS)
THEN-TRANSFER-IT-TO-THE-TERM-DETECTOR, OTHERWISE-TRANSFER
THE-DEFAULT-BYTE-TRANSLATOR-TABLE.
      98
99
     100
     101
     102
     103
          000144
                                                          RUNC::
                       004767
     104
          000144
                                  000000G
                                                                                  PC.HANG
#0.TD$SW
                                                                       JSR
                                                                                                          :ALLOW-FOR-STOPPING-TEST-
                      012767
012702
     105
           600150
                                                                                                         RESET-TD:

:TRANSFER:SAME:TABLE:4 TIMES

:LOAD:START:ADDRESS:

:NUMBER:0F:WORDS:IN:TABLE:

:IS:OVERRIDE:TABLE IN:USE:
                                  000000
                                             176376
                                                                      MOV
           000156
                                  000004
                                                                      MOV-
                                  000000G · 000000G ·
     107
          000162
                       016767
                                                                      MOV
                                                                                  TLOW,MSTR2
     108
          000170
                       012700
                                  001000
                                                                      MOV
                                                                                  #64..RA
           000174
     109
                       032767
                                  000000G · 000000G
                                                                      BIT
                                                                                  #RIDE,BASE
     110
          000202
                       001403
                                                                      BED.
                                                                                  12$
     111
112
          000204
000210
                      012701
                                  000000G
                                                                      MOV
                                                                                  #BTOVER,R1
                                                                                                          ;POINT TO OVERRIDE TABLE
                                                                      BR
                      000402
                                                                                  14$
     113 000212
                      012701
                                  000000G
                                                          12$:
                                                                      MOV
                                                                                  #BTRANS,R1
                                                                                                          :R1 -> BYTE TRANS TABLE
     114 000216
                      012767
                                                76360 14$: MOV #T$ICD, TD$CTU. :$ET INTERFACE AND CONTRO Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                  000040
                                             176360
```

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TRUN-
           MACRO Mi 110 27-MAR-80 15:40 PAGE 5-2-
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      115
           000224
                                     000030 176362
000000G-176364
                                                                           MOM:
                                                                                        #T$BTAR,TD$TAW
                        012767
                                                                                                                :SELECT BYTE TRANS MAR
      116
            888232
                        016767
                                                                           MOV.
                                                                                       MSTR2,TD$TDW
#T$BT,TD$TAW
(R1)+,TD$TDW
                         012767
                                     000020
            000240
                                                  176362
                                                                           MOV
                                                                                                                :SELECT-BYTE-TRANS MEMORY
      118
            000246
                         012167
                                                                           MOV-
                                                                           INC
      119
            000252
                         885267
                                     000000G
                                                                                       MSTR2
                                                                                                                :ADVANCE ADDRESS
            000256
                         005300
      120
                                                                                       RЯ
            000260
                                                                           BGT
      i2i
                         00336i
                                                                                       193
      122
123
124
           000262
                        005302
                                                                                                                :SUB · FROM · OUTER · LOOP · COUNT ·
                                                                           DEC
           000264
                        001341
                                                                                       100$
                                                                           TRANSFER-FROM THE LOCAL DATA BUFFER TO THE TERM DETECTOR INPUT BUFFER. THE FIELD TDATALM: CONTAINS THE NUMBER OF 6-BIT BYTE CHARACTERS IN THE LOCAL BUFFER. CONVERT THIS VALUE INTO A NUMBER OF PDP 11 WORDS FOR CONTROLLING THE TRANSFER. 4 6-BIT BYTES FIT INTO 3 8-BIT BYTES. 8 6-BIT BYTES FIT INTO 3 15-BIT BYTES.
      125
      126
127
      128
      129
                                                                           BYTES FIT INTO 3 16-BIT WORDS.
      139
      131
            000266
                         016701
                                     000000G
                                                                           MOV
                                                                                       DATALN,R1
                                                                                                                :NUMBER.OF.6-BIT.BYTES
:MULT.BY 2.
      133
            000272
                         006301
                                                                           ASL -
                                                                                       R1
                                                                                                                *NUMBER OF 6-BIT BYTES *RESULT = NUMBER OF BYTES X3
      134
            000274
                         016702
                                     000000G
                                                                           MOV
                                                                                       DATALN, R2
      135
            <u>вавзаа</u>
                         060201
                                                                           ADD.
                                                                                       R2,R1
            000302
                         006201
      136
                                                                           ASR.
                                                                                       R1
                                                                                                                FOR NUMBER OF
            000304
      137
                         006201
                                                                           ASR
                                                                                       R1
      138
            000306
                         006201
                                                                           ASR -
                                                                                       R1
                                                                                                                :WORDS: SAVE FOR REPEATED USE
      139
            000310
                         010146
      140
                                                                          FILL UP THE TERM DETECTOR INPUT BUFFER. MOVE THE LOCAL DATA BUFFER TO THE TERM DETECTOR REPEATEDLY # - UNTIL THE TD INPUT BUFFER IS FULL WRAP AROUND ON BOTH BUFFERS (IE. SINCE THE AMOUNT OF DATA IN THE *LOCAL DATA BUFFER WILL PROBABLY NOT BE ENOUGH TO FILL THE TD INPUT BUFFER. TRANSFER THE SAME DATA REPEATEDLY).
      141
       142
      143
      144
       145
       146
      147
            000312
000314
                         011601
                                                                                                                :NUMBER OF WORDS IN DATA: TABLE
      148
                                                                           MOV
                                                                                        (SP),R1
                         012702
                                     000000G
                                                                           MOV
                                                                                       #DTBL,R2.
ILOW,R3
                                                                                                                :R2--> DATA TABLE :
:R3 -> INPUT BUFFER :
:SIMULATE DISK INPUT
                         016703
       150
            000320
                                     000000G
                                                                           MOV
      15 i
            000324
                         012767
                                     000200 176360
                                                                           MCV
                                                                                        #T$DISK,TD$CTW
            000332
       152
                         312223
                                                              1$:
                                                                           MOV
                                                                                        (R2)+,(R3)+
TD$SW,R4
                                                                                                                :MOVE · FROM · PGM · BUFFER · TO · TD · INPUT · BUFFER ·
       153
            000334
                         016704
                                      176376
                                                                           MOV
                                                                                                                :LOAD TO STATUS REG:
:TEST FOR INPUT BUFFER FULL:
:FULL: START CLOCK NOW:
      154
            000340
                         032704
                                     040000
                                                                                        #T$IBF,R4
                         001011
       155
            000344
                                                                           BNE
                                                                                       2$
                         020367
       156
            000346
                                     BBBBBBB
                                                                                       R3, IHIGH-
                                                                                                                RUN OUT OF MEMORY
YES, START CLOCK
                                                                           CMP
       157
            000352
                                                                           BGT.
                                                                                        2$
                                                                                                                :SUB · FROM · NUMBBER · OF · WORDS ·
       158
            000354
                         005301
                                                                           DEC
                                                                                       R1
            000356
       159
                         003365
                                                                           BGT
                                                                                        1 $
                                                                                                                 : MOVE · NEXT
                                                                                                                :RELOAD-NUMBER-OF-WORDS-IN-1DATA1 TABLE-
;R2--> 1DATA1 TABLE-
;KEEP-MOVING-
       160
                         011601
                                                                           MOV
                                                                                        (SP).R1
      161
            000362
                         012702
                                     000000G
                                                                           MOV
       162
            000366
                         000761
                                                                           BR
                                                                           RUN-THE-TERM DETECTOR: WHEN-THE-TD-INPUT-BUFFER-GOES *NOT-FULL* TRANSFER-FROM-THE-LOCAL-DATA-BUFFER-TO-THE-TD-INPUT-BUFFER: R3 -> TD-INPUT-BUFFER:
       164
      165
      166
           000376
000376
                                                                                        #KT$DISK+T$SCLK+T$MODE>.TD$CTW :SIMULATE DISK THRUT
      168
                         012767
                                     024200
                                                  176360
                                                                           MOV
                                     000000G 000000G 3$:
      169
                         332767
                                                                           BIT.
                                                                                        #LOOP,BASE
                                                                                                                ;L00P?
                        001470
      170
            000404
                                                                                                                 :NO. RESTORE SP AND EXIT
                                                                           BED
                                                                                       RUST
            000406
                         016704
                                     176376
                                                                                                     :LOAD TO STATUS REG
CIA-RDP85-00514R000200020001-3
                                                   Approved For Release 2005/07/12
```

Back will bear

TRUN-0 M1110 27-MAR-80 15:40 PAGE 5-3 Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3 172-888412 832784 й4йййй BIT. #T\$IBF,R4 ; IS · INPUT · BUFFER · FULL 173 ;YES, WAIT FOR NOT FULL 000416 001367 BHE 3\$ 000000G CMP R3.IHIGH RUN OUT OF INPUT BUFFER 000420 020367 :NO. CONTINUE: :RE-INIT INPUT-BUFFER:POINTER: :FINISHED:WITH:'DATA: BUFFER BLF 175 000424 003402 4\$ ILOW, R3 016703 nananag. MOM 000426 176 000432 DEC ; NO; CONTINUE: ; RELOAD NUMBER OF WORDS IN 'DATA' ; RE-INIT 'DATA' TABLE POINTER: ; LOAD INPUT BUFFER 178 000434 003003 BGT 5\$ (SP),R1 MOV-179 000436 011601 180 000440 012702 000000G MOV #DTBL,R2 181 000444 012223 5\$: 182 ${\tt READ\cdot TD\cdot OUTPUT\cdot AVAILABLE\cdot REGISTER.}$ ACT DEPENDING ON PRINT-OPTIONS ${\tt SET\cdot ABOVE.}$ 183 184 185 READ WITHOUT PRINT. 186 187 000446 i 88 032767 000000G · 000000G #QN,BASE :READ TO OUTPUT AND NO PRINT 189 000454 001410 BEQ 7\$:NO. TRY READ AND PRINT TD\$OAR.R4 :READ OUTPUT AVAILABLE REGISTER :IS OUTPUT AVAILABLE 198 000456 016704 176344 6\$: MOV 000462 100000 191 032704 #T\$OUTA,R4 BIT. 001743 000466 BEQ 3\$; NO, CONTINUE RUN-193 000470 016705 176346 MOV TD\$OTR,R5 :READ OUTPUT 000770 : READ UNTIL EMPTY 000474 194 BR 6\$ 195 196 READ - AND - PRINT -197 198 000476 032767 000000G.000000G.7\$: BIT #QP,BASE :READ.OUTPUT.AND.PRINT. :NO. CONTINUE.RUN. 000504 001734 199 3\$ BEO 000506 016704 176344 TD\$OAR,R4 ; READ · OUTPUT · AVAILABLE · REGISTER 200 MOV 201 000512 032704 100000 BIT #T\$OUTA,R4 ; IS-OUTPUT-AVAILABLE 292 000516 :YES, PRINT IT 991996 BNE 94 203 000520 012767 046505 000000G #"EM.PRINT MOV : FMPTY 000526 000000G 204 004767 JSR PC.CONSOL. :PRINT-MESSAGE 205 000532 000721 ΒŔ :TRY-AGAIN 206 000534 032767 000000G.000000G.9\$: BIT #LOOP,BASE :LOOP.ON ;NO, EXIT: ;POINT:TO:PRINT:LINE RUST #PRINT, R5 207 000542 001411 BED 208 000544 012705 000000G MOV 209 000550 016701 176346 MOV TD\$OTR,R1 :READ OUTPUT 004767 JSR JSR 210 000554 имимиясь. PC JUNPK -:CONVERT ----211 000560 004767 000000G PC,CONSOL :PRINT IT :TRY AGAIN 212 000564 000750 BR 000566 214 215 005726 RUST: TST (SP) +:RESTORE SP 000570 RU1X: 216 000570 000000C-000000G BIC #<QP+QN>.BASE ;CLEAR - RUN - FLAGS 042767 004767 217 000576 000000G JSR PC.KILL ;KILL-AST-(IF-THERE-IS-ONE) 218 000602 000167 000000G .IMP COMXX: 219 220 000001 .END

```
MACRO M1110 27-MAR-80 15:40 PAGE 5-4
TARLE TARLES Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
TRUN-
SYMBOL TABLE
ALUCKE = · 040000
                                BYTE4 = 0000004
                                                               BYTE91= 000133
                                                                                               MNOBRE = 100000
                                                                                                                               Q$NCLK= 176000
ALUOE:=:004000
A01 =:010000
BASE:=:********** GX:
                                                                                               MREN1 = 000001
MREN2 = 020000
                               BYTE40= 000050
                                                               BYTE92=-000134
                                                                                                                               Q$PP = 000100
                               BYTE41 = . 000051
                                                                                                                               Q$PPSW= 000320
Q$PPS = 000320
                                                               BYTE93 = . 000135
                                BYTE42 - 000052
                                                               BYTE94= 000136
                                                                                               MSTR2 - - ***** GX
BITVAL= 000000
                                BYTE43= 000053
                                                               BYTE95= 000137
                                                                                               MSYN - 000040
                                                                                                                               Q$QHLT= 000013
      = 000001
BITO
                               BYTE44= 000054
                                                               BYTE96= 000140
                                                                                                                              Q$QL = 000043
Q$QLA = 000053
                                                                                                       = 000144
BITI
        =·000002
                               BYTE45= 000055
                                                               BYTE97= 000141
                                                                                                       = 000010
BITIO
       = 002000
                                BYTE46= 000056
                                                               BYTE98= 000142
                                                                                               PLC:
                                                                                                       = 000020
                                                                                                                               Q$QLB - = - 000054
BIT11 = 004000
                                BYTE47= .000057
                                                               BYTE99= 000143
                                                                                                       = 000020
                                                                                                                               Q$QLR - 000004
Q$QW = 000042
                                                                                               PLD.
BIT12 - - 010000
                               BYTE48 = -000060
                                                               BYTVAL = 000144
                                                                                               PLRWR - = - 000200
BIT13 = 020000
                               BYTE49= 000061
                                                               CBKALL= .001000
                                                                                               PLR.EN= 000200
                                                                                                                               Q$RDCD=-000005
BIT14
       = 040000
                                BYTE5 = 000005
                                                               CBKCLK = . 000400
CNOBRE = . 100000
                                                                                               PRINT = ****** GX
                                                                                                                               Q$RDMD= . 000006
       = 100000
                                BYTE50= 000062
                                                                                               QN - жжжжжж GX
                                                                                                                              O$REBK=-001000
O$RNC-=-006000
O$RSC-=-004000
BIT2.
       = 000004
                                BYTE51=-000063
                                                               COMXX = ****** GX
                                                                                                      = · ******* GX
       = · 000010
= · 000020
                                                                                               0R$CR1= 176420
0R$CR2= 176422
BIT3
                                BYTE52= 000064
                                                               CONSOL= ****** GX
BIT4
                                BYTE53 = . 000065
                                                               CPCCEN= 010000
                                                                                                                               Q$RSET= 000010
        = . 000040
BIT5
                               BYTE54= · 000066
BYTE55= · 000067
                                                               CPREAD = . 040000
                                                                                               QR$LBR= 176424
                                                                                                                              Q$SM = 100000
O$SP? # 000120
Q$SP2 = 000340
        = 000100
                                                                                               BIT6
                                                               CPWRTE = . 020000
                               BYTE56=-0000070
BYTE57=-000071
BIT7
        = 000200
                                                               CSADRD= 000004
CSEQCI= 100000
        = 000400
BITS
                                                                                                                               RGO EN= 000200
        = 001000
BIT9
                               BYTE58=-000072
BYTE59=-000073
BYTE6 =-000006
                                                               CSOE - - 000040
                                                                                                                               RGQ.VA= 020000
BTOVER= *****
                                                               CSWRTE=-000100
                                                                                               Q$CHRL= 000200
                                                                                                                               RIDE
                                                                                                                                      BTRANS= ****** GX
                                                               DATALN= ****** GX
                                                                                               Q$CLR·=·000040
Q$CNC·=·030000
Q$CP·=-000060
BYTE0 = 000000
BYTE1 = 000001
                                                                                                                               RUNC
                                                                                                                                         000144RG
                                                                                                                                                         002.
                               BYTE60= .000074
BYTE61= .000075
                                                               DBR.RD= 000001
                                                                                                                               RUQŊ
                                                                                                                                         000134RG
                                                                                                                                                         002
                                                               DB$CPP= 001457
DB$SPT= 000026
                                                                                                                               RUQĖ
RUSC
                                                                                                                                         000124RG
                                                                                                                                                         002
BYTE10= 000012
BYTE11= 000013
                                BYTE62= 000076
                                                                                               Q$CPCC≂√000010
                                                                                                                                         000070RG
                                                                                                                                                         002
                               BYTE63= 000077
                                                               DB$TPC= 000023
                                                                                               Q$CP2 -- 000260
Q$CSC -- 010000
                                                                                                                               RUST
                                                                                                                                         000566R
                                                                                                                                                         002
BYTE12= 000014
                               BYTE64= 000100
                                                               DISPGS= 100000
                                                                                                                               RU1
                                                                                                                                         000020RG
                                                                                                                                                         002
BYTE13= 000015
                                BYTE65= 000101
                                                               DMAAWR= 000005
                                                                                               Q$CSEL=-000360
                                                                                                                              RU1LN = 0000004 G
BYTE14= 0000016
                                BYTE66= 000102
                                                               DMARRD = : 000003
                                                                                               Q$CSET=-000002
                                                                                                                               RUITBL -
                                                                                                                                         имимия в
                                                                                                                                                         ดดว
                               BYTE67= 000103
BYTE68= 000104
BYTE15= 000017
                                                                                               Q$CSP-=-020000
Q$DMA-=-000001
                                                               DMARWR = . 000004
                                                                                                                                         000570R
BYTE16= 000020
                                                                                                                                                         002
                                                               DTBL · = · ******
                                                                                                                               SCAN
                                                                                                                                         жжжжжж БХ
BYTE17= 000021
                               BYTE69= 000105
BYTE7 = 000007
                                                                      = - 010000
                                                               ENBR -
                                                                                               Q$ENBK= .040000
                                                                                                                               SEQ.CI=-000010
S$CLR-=-000000
BYTE18= 000022
BYTE19= 000023
                                                               ERR18 = ****** GX
                                                                                               Q$ENOP = 020000
                               BYTE70= 000106
BYTE71= 000107
BYTE72= 000110
                                                               ERR3
                                                                      = · ******
                                                                                                                                      = 000001
= 000005
                                                                                               Q$FAL = 004000
Q$FC = 000045
                                                                                   GX
                                                                                                                               S$LA
BYTE2 - 000002
                                                               S¢QB
BYTE20= 000024
                                                                                                       = 000044
                                                                                               Q$F0.
                                                                                                                               S$OR
                                                                                                                                      = . 000006
BYTE21= 000025
                                BYTE73= 000111
                                                               IHIGH-=-жжжжжжж GX
                                                                                               OSEP -
                                                                                                      = 000046
                                                                                                                               S$QX
                                                                                                                                      = .000004
                                                               BYTE22~ 000026
BYTE23- 000027
                               BYTE74= 000112
BYTE75= 000113
                                                                                               Q$HBF = 000002
                                                                                                                              S$SR
                                                                                               Q$ICP -- 000006
                                                                                                                                      = 0000010
                                                                                                                               S$S1
BYTE24= 000030
                                BYTE76= 000114
                                                               LOC.EN= 000100
                                                                                               Q$IHB.=.000003
                                                                                                                               S$S2
                                                                                                                                      = .000014
BYTE25=-000031
                                BYTE77= 000115
                                                               LOJ.WA= 040000
LOC.WB= 100000
                                                                                               Q$IHRL=-000002
                                                                                                                               TD$CTR=:176370
BYTE26= nnnn32
                                BYTE78= 000116
                                                                                               O$IMRP= · 000007
                                                                                                                               TD,$CTW≃-176360
BYTE27 = · 000033
                               BYTE79= 000117
BYTE0 = 000010
                                                               Q$LBD·=·001000
                                                                                                                             TD$INL= 004000
#TD$MEM₽ 000270
BYTE28= 000034
                                                                                               Q$LBD = 001000
Q$LBDP = 001001
Q$LBP = 000003
Q$LDCD = 000003
BYTE29= 0000035
                                BYTE80= 000120
                                                               MAREN1 = 000001
                                                                                                                               TD$OAR = 176344
BYTE3 = 000003
                               BYTE81= 000121
                                                               MAREN2 = · 004000
                                                                                                                               TD$0TR=-176346
BYTE30= 000036
                               BYTE82=-000122
                                                               MARLOD= 010000
                                                                                                                               TD$QRD=.000274
TD$SW.=.176376
TD$TAR=.176372
BYTE31 = . 000037
                                                               MAROUT= 000002
MAR.LO= 002000
MAR.OU= 000040
                               BYTE83 = . 000123
                                                                                               Q$LDPP=:002000
BYTE32= 000040
BYTE33= 000041
                                BYTE84= 000124
                                                                                               Q$LHP·=·010000
Q$MMC·=·140000
                                BYTE85= 000125
                                                                                                                               TD$TAW= 176362
BYTE34= 000042
                                                               MBKALL = 001000
MBKCLK = 000400
                               BYTE86= . 000126
                                                                                                      = 000052
                                                                                                                               TD$TDR=: 176374
                               BYTE07=.000127
BYTE35= 000043
                                                                                               0$MRP - - 000040
                                                                                                                               TD$TDW=:176364
TLOW ∳~**********
T$AD = 000020
BYTE36= 000044
                                                               MMADRD = 000100
MMLEFT = 000002
MMOE = 000004
                                                                                               Q$MRP2= 000240...
Q$MSC -- 040000
Q$MSET= 000004
                               BYTE88=.000130
                                                                                                                              .πLOW
T$AD
BYTE37 = 000045
                               BYTE89= 000131
BYTE38= 000046
                               BYTE9 = 000011
                                                                                                                               T$BA
BYTE39= 000047
                               BYTE90= 000132
                                           MMWRTE = 000010
Approved For Release 2005/07/11
                                                                                                                                      = 000010
                                                                                    CIA-RDP85-00514R000200020001-3 T$BD
```

```
SYMBOL TA
                     0 M1110 27-MAR-80 15:40 PAGE 5-5
Approved For Release 2005/07/11 IA-RDP85-00514R000200020001-3
T$850-≕-100000
T$8T- ≕-000020
                                                                                                                                WORD51= 000146
WORD52= 000150
WORD53= 000152
WORD54= 000154
                                                                                      WORD26= 000064
WORD27= 000066
                                           T$SCLK = . 020000
                                                                                                                                                                           WORD77=-000232
                                           T$SEG1 = 000000
T$BTAR = 000020
T$BTAR = 000030
T$BTD = 002000
T$CD = 000100
T$CLK = 002000
                                                                                                                                                                           WORD78= 000234
WORD79= 000236
WORD8 = 000020
                                           T$SEG2=:000001
                                                                                      WORD28= 000070
                                           T$SEG3=-000002
T$SO- =-000001
T$UBUS=-100000
                                                                                      WORD29= 000072
                                                                                      WORD3 = 000006
                                                                                                                                WORD55= 000156
                                                                                                                                                                           WORD80= 000240
                                                                                      WORD30=-000074
WORD31=-000076
WORD32=-000100
                                                                                                                                WORD56 = 000160
                                                                                                                                                                           WORD81= 7000242 = WORD82= 000244 WORD83= 000246
T$DISK=-000200
T$DRD-=-000004
                                           T$1CLK=:000400
                                                                                                                                WORD57= 000162
                                          1$1CLK=.000400
T$8BEN=.000020
UBD.IN=.000020
UNPK-.=.xxxxxxxx GX-
WORD0 =.00000
WORD1 =.00002
WORD10=.00002
                                                                                                                                WORD58= 000164
T$EMEM= · 010000
                                                                                      WORD33= 000102
                                                                                                                                WORD59= 000166
                                                                                                                                                                           WORD84= 000250
T$FSAA=.000000
T$FSAB=.000004
T$FSAC=.000014
                                                                                      WORD34=-000104
WORD35=-000106
                                                                                                                                WORD6 = 000014
                                                                                                                                                                           WORD85=:000252
WORD86=:000254
WORD87=:000256
                                                                                                                                WORD60= 000170
WORD61= 000172
                                                                                      WORD35=-000110
WORD37=-000112
T$F$B2=.000010
T$IB. =.000026
T$IBAR=.000024
                                                                                                                                WORD62= 000174
                                                                                                                                                                           WORD88= 000260
                                           WORD11= 000026
                                                                                      WORD38=-000114
WORD39=-000116
                                                                                                                                WORD63= 000176
                                                                                                                                                                           WORD89= 000262
WORD9 = 000022
                                           WORD12= 000030
WORD13= 000032
WORD14= 000034
T$18HR = .000024
T$1BE - = .020000
T$1BF - = .040000
T$1CD - = .000040
T$MODE = .004000
                                                                                                                                WORD64= 000200
                                                                                      WORD4 = 000010
                                                                                                                                                                          WORD90= 000264
WORD91= 000266
WORD92= 000270
                                                                                                                                WORD65= 000202
WORD66= 000204
WORD67= 000206
                                                                                      WORD40= 000120
WORD41= 000122
WORD42= 000124
                                           WORD15= 000036
                                           WORD16= 000040
WORD17= 000042
WORD18= 000044
                                                                                                                                WORD68= 000210
WORD69= 000212
WORD7 = 000016
                                                                                                                                                                           WORD93= 000272
T$0B: = 000036
T$0BE: = 004000
T$0BF: = 010000
                                                                                     WORD42--000124
WORD43--000126
WORD44--000130
                                                                                                                                                                           WORD94= 000274
WORD95= 000276
                                           WORD19=-000046
WORD2-=-000004
WORD20=-000050
                                                                                      WORD45=-000132
                                                                                                                                WORD70= 000214
WORD71= 000216
WORD72= 000220
                                                                                                                                                                           WORD96= 000300
T$0BRA= · 000034
                                                                                      WORD46= 000134
                                                                                                                                                                           WORD97=-000302
T$0BWA= · 000034
T$0UTA= · 100000
                                                                                      WORD47= 000136
WORD48= 000140
                                                                                                                                                                           WORD98=-000304
                                           WORD21=-000052
                                                                                                                                WORD73=-000222
                                                                                                                                                                           WORD99--000304
T$RBDO= 000200
                                           WORD22 - 000054
WORD23 - 000056
                                                                                      WORD49= 000142
                                                                                                                                WORD74=-000224
WORD75=-000226
WORD76=-000230
                                                                                                                                                                           WRDVAL = - 000310
T$RNB - = - 000040
                                                                                      WORD5 - 000012
                                                                                                                                                                           XTREAD = 001000 XTWRTE = 000400
T$RSET= 040000
                                           WORD24= 000060
                                                                                      WORD50= 000144
                                           WORD25= 000062
T$SC: =:000022
. ABS.
              000000
                                  000
              000000
                                  001
TRUN-
              000606
                                  002
ERRORS DETECTED:
                               Ø
VIRTUAL MEMORY USED: 3221 WORDS ( 13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:45
TRUN, TRUN/-SP=[20,1]IM,[20,1]TRUN
```

*

AIDTD.TSK

MEMORY ALLOCATION MAP. TKB. 27-MAR-80 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3

TASK. NAME.:...AID.
PARTITION.NAME.: GEN
IDENTIFICATION.: 08
TASK. UIC.: [20.3].
STACK. LIMITS: 040216 041215 001000 00512.
PRG.XFR.ADDRESS: 051734
TASK.ATTRIBUTES: AL.CP.
TOTAL.ADDRESS.WINDOWS: 2.
TASK. IMMGE. SIZE.: 8032; WORDS.
TASK.ADDRESS.LIMITS: 040000 077253
R-W DISK.BLK.LIMITS: 000042 000110 000047 00039.

AIDTD.TSK;3 OVERLAY DESCRIPTION:

BASE -	TOP ·	LENG	TH -	
040000	071007	031010	12808.	TMAIN
071010	072077	001070	00568.	TREG
071010	073353	002344	01252.	TMEM
071010	077253	006244	03236.	TDATA
071010	071617	000610	00392.	TRUN

*** ROOT-SEGMENT: TMAIN-R/W-MEM- LIMITS: 040000 071007 031010 12808. DISK-BLK-LIMITS: 000042-000073 000032-00026. MEMORY-ALLOCATION-SYNOPSIS: SECTION. . . TITLE. IDENT, FILE. . BLK.:(RW.I.LCL.REL.CON) 041216 021300 08896. 041216 014224 06292. TMAIN TMAIN.OBJ: 1 \$\$ALER:(RW.I.LCL.REL.CON) 062516 000024 \$\$ALVC:(RW,D,LCL,REL,CON) \$\$AUTO:(RW,I,LCL,REL,CON) 062542-000130 00088. 062672-000130 00088. 000130 00088. \$\$F\$R1:(RW.D.GBL.REL.OVR) 063022 002040 01056. 063022 002040 01056. TMAIN 065062 000104 00068. TMAIN.OBJ:1 \$\$F\$R2:(RW.D.GBL,REL.CON) \$\$MRKS:(RO.I.LCL.REL.OVR) 070540 000076 \$\$OVDT:(RW,D,LCL,REL,OVR) \$\$OVRS:(RW,I,LCL,ABS,CON) 00062. 065166 000020 равара 000000 00000. \$\$RDSG:(RO.I,LCL,REL,OVR) 070636 000150 00104. \$\$RESL:(RW.I,LCL.REL,CON) \$\$RESM:(RW.I,LCL,REL,CON) \$\$RGDS:(RW.D,LCL,REL,CON) 065206 003232 01690. 132000 007656 00000. 070440 000000 \$\$RTS : (RW.I.GBL, REL, OVR) 070440 000002 00002. \$\$SGD0:(RW.D.LCL.REL.OVR) 070442-000000 авава. \$\$SGD1:(RW.D.LCL.REL.CON) 070442-000074 00060. \$\$SGD2:(RW.D.LCL.REL.OVR) 070536 000002 00002. \$\$WNDS:(RW.D.LCL.REL.CON) 070540 000000 00000. GLOBAL SYMBOLS: AH I GH -841424-R CLOW-041436-R 000001 ERR21 055026-R 055022-R INCVAL 041376-R OLOW-041446-R 041426-R SCAN 054224-R ALOW CMILUN-000002 ENDMEM 055002-R ERR22 IO.DET 002000 IO.RVB 010400 ONCE 000010 SELTST-055156-R APLACE · 041234-R CHUM 000015 ENDTST 054772-R. ERR23 055016-R OUT. 002000 STAT 041222-R-ASTFLG 000020 COMXX. 051740-R **ENFILE** 054776-R FRRZ 055136-R IO.WVB 011000 OUT1 055012-R STOP. 055006-R BASE -Ñ41232+R CONSOL -054610-R 062632-R · ERR4 055132-R-054124-R KILL. PACK 054434-R 055162-R ST4 962552+R COUNT: 041404-R ERR 1 055146-R ERR5 055126-R LDCHTL · 052440-R

055122-R

055116-R 055112-R

055106-R

054316-R:

05404A-R-

·041236-R

GCMLEN : 041360-R :

GCMPNT-041362-R

GCONLY-053726-R

IHIGH: 041440-R:

LD1

LI1

LOOP

LOOPR .

LPTST.

MEND.

MSTRT

MSTR2

LUN.TT

PDATA

PRINT

PR1

RIDE .

QN.

062562-R

054004-R

055152-R

041374-R

041370-R

-R 0FF6 041412-R RTNPT 041366-R -R 0HIGH 041444-R RUI 062662-R | CIA-RDP85-00514R000200020001-3

000004

000001

OFFSET 053224-R

052620-R

047072-R

062572-R

001000

000400

062542

000100

PRCNTL - 053032-R

PRDATA : 053126-R

THIGH.

TRLUM.

UNPK

041450-R

000004

062652-R

054544-R

UB IM CANABZR UUORDS 041416-R \$DIV '007146

007116

TLOUS 04005000 TRFDB 051536-R

TR6TBL · 046266-R

TXTEDB: 051340-R

TXTLUN-000003

MAP TKB PAGE 2 PAGE 12 CIA-RDP85-00514R000200020001-3

AIDTD.TSK:3

BHIGH-

BINWD .

BTEND.

BUES2.

CHIGH:

CHLEN-

CHI

BLOW-

041430-R

041230-R

041432-R

046666-R

052222-R

Й41434-R.

041414-R

062602-R

BTOVER - 046670-R -

BTRANS 046466-R

BUFFSA 052044-R

BUFSET-052232-R

CTBL .

DATAL

DATA2

DATA3

DPLUS.

DSAVE -

DSEND -

DTBL -

DA1

DF I

DBLD

041454-R

041416-R

041420-R

041422-R

062612-R

053312-R

062622-R

043540-R

046264-R

041540-R

DATALN:041406-R

ERR10

ERR11

ERR12

ERR13

ERR14

ERR15

ERR16

ERR17

ERR18

ERR19

ERR2

ERR20

055102-R

055076-R

055072-R

055066-R

055062-R

055056-R

055052-R

055046-R

055042-R

055036-R ·

055032-R

Approved For Release 2005/07/1

055142-R

ERR6

ERR7

ERR8

ERR9

FIND

HANG.

ILOW.

GCMBUF

MEMORY ALLOCATION MAP TKB 27-MAR-80

TREG.

MEMORY ALLOCATION MAP. TKB 27-MAR-80 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 : . . .

*** SEGMENT: TREG.

R/W-MEM- LIMITS: 071010 072077:001070 00568. DISK-BLK-LIMITS: 000074 000075 000002.00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. . .

TITLE . IDENT: FILE . .

BLK::(RW.I.LCL.REL.CON) 071010 000000 00000. TREG : (RW.I.LCL.REL.CON) 071010 001070 00568.

071010 001070 00568. TREG

\$\$ALVC:(RW.D.LCL.REL.CON) 072100 000000 000000. \$\$RTS::(RW.I.GBL.REL.OVR) 070440 000002.00002.

TREG.OBJ:1

GLOBAL SYMBOLS:

REAA 071536-R. REIA. 071670-R: REILN 000013 071720-R: REITBL 071050-R: 071646-R: STA: 071234-R: 071356-R: STO: 071332-R
071254-R: STSC: 071402-R
071426-R: STI: 071124-R
071306-R: STILN 000010 STBT 071552-R-071566-R-071712-R-REBA 071726-R 071624-R REMS RESW RETA STC. STCR. RECA REDA RECR . 071456-R 071750-R STB 071244-R

AIDTD.TSK:3 MEMORY ALLOCATION MAP TKB PAGE 4
TMEM 27-MAR-80 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

*** SEGMENT: TMEM . . .

/U-MEM- LIMITS: 071010 073353 002344 01252. 9ISK-BLK-LIMITS: 000076 000100 000003 00003.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION

TITLE . IDENT: FILE . .

. BLK::(RW.I.LCL.REL.CON) 071010 000000 00000. TMEM::(RW.I.LCL.REL.CON) 071010 002344 01252. 071010 002344 01252. TMEM

\$\$ALVC:(RW.D.LCL.REL.CON) 073354 000000 00000. \$\$RTS::(RW.I.GBL.REL.OVR) 070440 000002 00002.

TMEM.OBJ;1

GLOBAL · SYMBOLS:

LDAM∙ 071342+R∙ LDCM∙ 072750-R: PR1 =:20023722R: 073004-R: PR1LN 000006 073102-R: PR1TBL:071040-R 072660-R: PRCM: 071376-R: LDIB: 072122-R: LDOB: LDBM. 072714-R: PRIB: LDBT. 071664-R LD1TBL 071010-R PRBT 073220-R PROB

AIDTD.TSK TDATA:

ALLOCATION MAP. TKB PAGE 5. 27-MAR-80 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 MEMORY ALLOCATION MAP TKB

*** SEGMENT: TDATA

R/W-MEM- LIMITS: 071010 077253 006244 03236. DISK-BLK-LIMITS: 000101 000107 000007 00007.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION, ...

TITLE. IDENT, FILE.

. BLK::(RW.I.LCL.REL.CON) 071010 000000 00000.
TDATA::(RW.I.LCL.REL.CON) 071010 002364 01268.
071010 002364 01268. TDATA

\$\$ALVC:(RW.D.LCL.REL.CON) 873374 000000 00000. \$\$RESL:(RW.I.LCL.REL.CON) 073374 003660 01968. \$\$RTS::(RW.I.GBL.REL.OVR) 070440 000002.00002.

TDATA.OBJ;1

3 168 - 1 La 19 1

GLOBAL·SYMBOLS:

CHBT---071406-R- CHITBL-071010-R- DFI 072326-R- LIBT- 072102-R- LI1TBL-071020-R- TRILN 000002- CHIB- 071270-R- DAI 071050-R- DFILN 000002- LIIB- 071702-R- TRBT- 073236-R- TRITBL-071040-R CHILN 071160-R- DFBT- 072606-R- DFITBL 071030-R- LII 071562-R- TRIB- 073144-R- CHILN 000002- DFIB- 072376-R- ENI 072234-R- LIILN 000002- TRI 073064-R-

MEMORY ALLOCATION MAP . TKB ALLOCATION MAP TKB PAGE 6 27-MAR-80 **Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3** AIDTD.TSK:3 TRUN.

*** SEGMENT: TRUN

R/W MEM- LIMITS: 071010 071617 000610 00392. DISK-BLK-LIMITS: 000110 000110 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. ..

TITLE, IDENT, FILE.

TRUN.OBJ;1

WAR TO SEE AND SEED AS

GLOBAL SYMBOLS:

RUNC- 071154-R- RUQN 071144-R: RUQP 071134-R: RUSC: 071100-R: RU1 071030-R: RUILN 000004

*** TASK BUILDER STATISTICS:

TOTAL WORK FILE REFERENCES: 40221.
WORK FILE READS: 0.
WORK FILE WRITES: 0.
SIZE OF CORE POOL: 9802. WORDS (38. PAGES)
SIZE OF WORK FILE: 8192. WORDS (32. PAGES)

ELAPSED TIME:00:00:28

```
1234567
                                                                           .FITLE - . RMAIN -
                                                                          MAIN MODULE
  8
 10
 11
13
14
 16
17
 18
19
20
21
22
23
24
25
26
27
28
                                                                          SUB-MODULES OF QMAIN:
                                                                          MRP -
CP
                                                                          BCE
29
31
33
33
35
36
37
38
39
40
                                                                          PPS
                                                                          SP
                                                                          SUB-MODULES OF MRP:
                                                                                        LOAD
                                                                          MRPR.
                                                                                        PRINT
                                                                          SUB-MODULES OF CP:
                                                                          CPLD.
                                                                                        LOAD
                                                                          CPPR
                                                                                        PRINT
                                                                          CPREST
42
43
44
                                                                          CPBUG1
                                                                          CPBUG2
45
46
47
48
49
50
51
55
55
55
55
56
```

HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS

THIS-MODULE PASSES CONTROL TO ITS SUB-MODULES (HOR PROCESSOR MODULES) BASED ON INFORMATION IN THE COMMAND LINE (TERMINAL INPUT). THE SUB-MODULES CONTINUE TO PARSE THE COMMAND LINE, TRANSFERRING CONTROL TO THEIR SUB-MODULES. THESE SUB-MODULES CONTINUE TO PARSE THE COMMAND LINE, TRANSFERRING CONTROL TO THEIR SUB-ROUTINES. TO THE ACTUAL INTERFACING WITH THE HARDWARE, THUS THERE ARE FOUR LEVELS OF CONTROL. FOR EXAMPLE, TAKE THE COMMAND; SMR LD MD. 8

THE 'MR' REPRESENTS THE FIRST LEVEL OF CONTROL AND IS PARSED BY THE MODULE QMAIN, THE 'LD' REPRESENTS THE SECOND LEVEL OF CONTROL AND IS PARSED BY THE MODULE QMAIN, THE COMMAIN SUB-MODULE MRP, THE MD. REPRESENTS THE SECOND LEVEL OF CONTROL AND IS PARSED BY THE MRP. SUB-MODULE MRP, THE MRD. THE FOURTH LEVEL OF CONTROL A SUB-ROUTINE OF MRLD, ACTUALLY CONTROLS THE LOADING OF THE HARDWARE.

```
MATCH REPORT PROCESSOR
CONTROL PROCESSOR BUS CONTROL ELEMENT PIPELINED PROCESSORS
SUBDOCUMENT PROCESSOR
```

```
MRREST: ALL:OTHER:COMMANDS:(EXCEPT:MICROCODE:DEBUGGING:COMMANDS)
MRBUG: DEBUGGING:COMMANDS:
```

```
ALL OTHER COMMANDS (EXCEPT MICROCODE DEBUGGING COMMANDS)
SOME MICROCODE DEBUGGING COMMANDS
THE REST OF THE DEBUGGING COMMANDS
```

```
SUB-MODULES OF BCE: BCREST ALL BCE COMMANDS
```

```
SUB-MODULES OF PPS:
PPLD.
        LOAD
PRINT
        ALL OTHER COMMANDS
```

SUB-MODULES.OF.SP: SPLD. LOAD PRINT SPREST ALL OTHER COMMANDS QMAIN. PO-M1110 27+MAR+80 15:17 PAGE-6 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 EGNTROL-IS-RETURNED-TO QMAIN-WHEN-ONE-OF-ITS-SUB-MODULES-ENCOUNTERS-AT-THE-SECOND-LEVEL-OF-CONTROL-(SEE-ABOVE) A-STRING-THAT-IT-CANNOT-PARSE, THE ASSUMPTION-IS-THAT-THIS-STRING-IS-THE-MNEMONIC FOR-ANDTHER-PROCESSOR, REQUIRING-A-TOP-WOOD-THE STRING-OF-CONTROL-OF-CO 59 60 61 62 TRANSFER OF CONTROL. FOR EXAMPLE, THE COMMAND 63 MR>CP-LD-CS-0 CANNOT BE PARSED BY MRP ((CPT IS NOT A VALID MRP COMMAND). CONTROL IS PASSED TO QMAIN WHICH CAN PARSE (CPT, CONTROL WILL THEN BE TRANSFERRED FROM QMAIN TO THE SUB-MODULE CP. 65 66 QMAIN.ALSO.CONTAINS.DATA.AND.SUBROUTINES.COMMON.TO.ALL.OF.ITS.SUB-MODULES.THERE.ARE ALSO.MODULES.CONTAINING.SUBROUTINES.FOR.THE.QMAIN.SUB-MODULES.THE.SUBROUTINE.MODULES.ARE.MRPSUB.RPSUB.AND.PPSUB.ROUTINES.IN.THESE.MODULES.ARE.GLOBAL.ALLOWING.CROSS-USAGE.THUS.THE.GEX.WINDOW.MEMORY.LOADING.ROUTINE.QLOWIN.SUB-MODULE.PPLD.OF.PPS) CALLS.THE.SUBROUTINE.SEGCS.IN.MODULE.CPSUB.AND.SUBROUTINE.SEGMM IN.MODULE MRPSUB. 68 69 70 73 74 78 ASSEMBLY: MCR>MAC.QMAIN,LP=IMO4,QMAIN. FROM . [5,3]. 80 TASK-BUILD:
1. HQR-STAND-ALONE-PACK-COMMAND-FILE-AIDQ2.CMDAIDQR-AL/CP/DA,AIDQR-QMAIN,MRP.MRLD,MRPR,MRREST,MRBUG, 81 82 84 85 CP.CPLD,CPPR,CPREST,CPBUG1,CPBUG2, BCE,BCREST, PPS,PPLD,PPPR,PPREST, 86 87 MRPSUB, CPSUB, PPSUB, [1,50]RSX11M, STB/SS. 88 89 PAR=PAR14K 90 ASG=TT0:1:2 91 92 93 2. MPIC-SYSTEM-COMMAND FILE-AIDOR.CMD-(USING-OVERLAYS) 95 ****************************** 96 97 TASK BUILD MUST BE DONE ON NPIC /04 98 99 100 101 AIDQR/AL/CP,AIDQR=AIDQR/MP 102 TASK = A I DOR 103 PAR=GEN:40000:40000 194 ASG=TT0:1:2 105 106 107 OVERLAY DESCRIPTION AIDOR: ODL: 108 MMAIN-E1,501RSX11M.STB/SS+*(A.B.C.D) MRP-MRPSUB-CPSUB-*(MRLD.MRPR.MRREST.MRBUG) CP-MRPSUB-CPSUB-PPSUB-(CPBUG1.CPBUG2.CPREST.CPLD.CPPR) .ROOT 109 A٠ .FCTR 110 Θ: 111 $\mathbb{C}:$.FCTR BCE-BCREST-D: .FCTR PPS-MRPSUB-CPSUB-PPSUB-(PPLD, PPPR, PPREST) 113 .END

```
QMAIN.
                    MACRO-M1110 27-MAR-80 15:17 PAGE_7
                                                                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
           115
          116
117
                                                                                                                              LOCAL DATA AREAS
           118
           119
                                                                                                                               .MCALL: QIOW$$,QIO$$,EXIT$$,ABRT$$,GCML$,GCMLB$,FSRSZ$,CLEF$$.MCALL: ASTX$$,RDAF$$,WTSE$$,SETF$$,RQST$$
           120
           122
           123
                                                                                                                                .GLOBL · IO.WVB, IO.RVB, IO.ATA, IO.DET
           124
           125
                                          000160
                                                                                                         G. DPRM-
                                                                                                                                                    000160
                                          000001
                                                                                                          LUN. TT
                                                                                                                                                                                                                   : READ/WRITE: TTO
           127
128
                                          00000i
                                                                                                          EFN.1
                                                                                                                                                                                                                    :EVENT.FLAG.FOR.TT0
                                          000002
                                                                                                          EFN.2
                                          яваява.
                                                                                                          EFH:3
                                                                                                                                                                                                                   #EVENT-FLAG-FOR-HOR-INTERRUPTS
#EVENT-FLAG-FOR-UNSOLICITED-TERMINAL-INTERRUPTS-
#EVENT-FLAG-FOR-COMMUNICATION-WITH-HOR-LOADER-
            130
                                          000004
                                                                                                         EFN:4
           131
                                          000041
                                                                                                          EEN. 33
                                                                                                                                                    33.
           132
                                          000002
                                                                                                          CMILUN
           133
            134
                                          000004
                                                                                                          LOOP
                                                                                                                                                                                                                   :LOOP.ON.COMMAND.
:PRINT.ONE WORD.ONLY
:QIO.+ AST ISSUED.
                                          000100
           135
                                                                                                          ONCE
                                                                                                                                                    100
           136
                                          000200
                                                                                                          ASTFLG
                                                                                                                                                    200
                                          001000
                                                                                                         ₽P
                                                                                                                                                    1000
                                                                                                                                                                                                                   REPEAT PROMPT
           138
                                                                                                         OUT.
                                                                                                                               ===
                                                                                                                                                    2000
                                                                                                                                                                                                                   CONTROL PRINTING OF MEMORY CONTENTS
           139
                                          004000
                                                                                                         BREAK.
                                                                                                                                                    4000
                                                                                                                                                                                                                   ; BREAKPOINT SET
            140
                                          010000
                                                                                                         NEQLB:
                                                                                                                                                    10000
                                                                                                                                                                                                                   ;NO-QLB-ERASE-
           141
           142
           143
                                                                                                                              .NLIST
                                                                                                                                                   BEX-
           144
                     000000
                                          003654
                                                                                                         MYSELF:: .RAD50 /AIDQR/
TSKTCB:: .WORD 0
                                                               066420
           145
                    000004
                                          000000
                                                                                                                                                                                                                   :TCB.OF.MY TASK
           146
                     000006
                                          000000
                                                                                                          OLDVEC::
                                                                                                                                 WORD
                                                                                                                                                   0
                                                                                                                                                                                                                   :OLD · VECTOR · AT · 274
           147
                     000010
                                          046531
                                                               014732
                                                                                                         LOADER: .RAD50
EFBUF:: .BLKW-
STAT:: .BLKW-
                                                                                                                                                   /LOADER/
           148
                    000014
                                                                                                                                                                                                                   :EVENT:FLAG:BUFFER:
           149
                    000024
                                                                                                         STAT:: .BLKW-
ERWORD:: .WORD
           150
                    000030
                                                                                                                                                                                                                  #INDEX.VALUE.FOR.ERROR.MESSAGE TABLE:
#TARGET.FOR.NUMERIC.CONVERSIONS.FROM.ASCII:
#ALL.PURPOSE.FLAG:
#PRELIM.BIT.SETTINGS FOR.CSR.1
                                          000000
                                                                                                                                                   ā
                    000032
           151
                                          000000
                                                                                                         BINWD:: .WORD
                                                                                                                                                   0
           152
                    000034
                                          000000
                                                                                                         BASE:: .WORD
APLACE:: .WORD
           153
                    000036
                                          000000
                                                                                                         APLACE:: .WORD - GCMBUF:: .BLKW -
                                                                                                                                                   Й
           154
                    000040
                                                                                                                                                                                                                  COMMAND LINE BUFFER
COMMAND LINE LENGTH
COMMAND LINE POINTER
COMMAND LINE POINTER
RECEIVER FOR AST CHAR
           155
                    000162
                                          000000
                                                                                                         GCMLEN:: .WORD
           156
                     000164
                                          000000
                                                                                                         GCMPNT:: .WORD
                                                                                                         ASTWRD:: .WORD
           157
                    000166
                                          000000
                                                                                                                                                   Й
           158
                    000170
                                          000000
                                                                                                         RTHPT:: .WORD
                                                                                                                                                                                                                   :RTN-ADDR-SAVE-AREA-
                     000172
                                          000000
                                                                                                         MSTRT:: .WORD
MSTR2:: .WORD
                                                                                                                                                                                                                   START ADDR FOR MEMORY LOADING PRINTING WORKING ADDR FOR LOAD PRINT TO ADDR FOR MEMORY LOADING PRINTING
          160
                   000174
                                                                                                                                                   ø
          161
                   000176
                                          000000
                                                                                                         MEND::
                                                                                                                              .WORD
          162 - 000200
                                                                                                         INCVAL:: .WORD
                                          ававав
                                                                                                                                                   0
                                                                                                                                                                                                                  #MEMORY INCREMENT VALUE : (COMMAND LINE) RESPONSE COUNT : MEMORY UPPER LIMIT :
                   000202
          163
                                         000000
                                                                                                         RSPCHT:: .WORD-
          164 000204
                                          000000
                                                                                                         UPLIM:: .WORD
          165
          166
                   000206
                                                                                                         WWORDS:
                                                                                                                                                                                                                   :LOAD/PRINT.VALUES
                    000206
                                         000000
                                                                                                         DATAI:: .WORD
                                                                                                                                                   Ø
          168
                   000210
                                         000000
                                                                                                         DATA2:: .WORD
                                                                                                                                                   0
                                                                                                                                                                                                                                                            MALE TO SELECTION OF THE SELECTION OF TH
                   000212
000214
         169
170
                                        000000
000000
                                                                                                         DATA3:: .WORD
                                                                                                         DATA4:: .WORD
         171
```

```
0 M1110 27-MAR-80 15:17 PAGE 7-1
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
                                                     MEMORY.LIMITS.TABLE.
173
    000216
000220
000222
174
175
              000377
                                           MMHIGH:: .WORD
                                                              255.
                                                                                           :MRP · MICROPGM · MEMORY
              ивравия
                                           MMLOW:: .WORD.
176
              007777
                                           MDHIGH::
                                                              4095.
                                                      .WORD
                                                                                           ; MRP · DATA · MEMORY ·
                                           MDLOW: .WORD
CSHIGH:: .WORD
    000224
178
179
    000226
              001777
                                                      .WORD
                                                              1023.
                                                                                           :CP · CONTROL · STORE
    000230
              ававава
                                           CSLOW:: .WORD
180
    000232
              007777
                                           CDHIGH:: .WORD
CDLOW:: .WORD
                                                      .WORD
                                                              4095.
                                                                                           : CP · DATA · MEMORY ·
i8i
    000234
              000000
182 - 000236
                                           QXHIGH::
                                                      .WORD
                                                                                           :=X'7FFF' QEX-MEMORIES:
:=X'7C00'
183 000240
              076000
                                           QXLOW:: .WORD
     000242
              007777
                                           FAHIGH:: .WORD
FALOW:: .WORD
LHHIGH:: .WORD
                                                              4095.
                                                                                           ; FAL · MEMORIES ·
i 85
    000244
186
     000246
              002000
                                                              1024.
                                                                                           :LHP·MEMORIES (ALTOW X代400 意子社位EGAL ADDRESS)
187
     000250
              000000
                                           LHLOW:: .WORD
     000252
188
              000177
                                           HLHIGH::
                                                      .WORD
                                                                                           :HRL · BUFFER · IN · CC · MEMORY ·
189
    000254
              000000
                                           HLLOW:: .WORD.
                                                              Й
190
    000256
                                           BLHIGH::
                                                      .WORD
                                                              12:
                                                                                           :BCL · IN · CC MEMORY ·
191
     000260
              000000
                                           BLLOW: .WORD
    000262
              000377
                                           SQHIGH::
                                                              255.
                                                                                           :SP-REFERENCE, QLB-MEMORIES-
i93
     000264
                                           SQLOW:: .WORD
                                                              Й
194 000266
195 000270
              000377
                                           SRHIGH::
                                                      LUORD
                                                              255.
                                                                                           ;SP·SIDREAD·MEMORY
              ййййййй
                                           SRLOW:: .WORD
     000272
              007777
                                           SDHIGH:: .WORD
                                                              4095.
                                                                                           #SP SIDMEM MEMORY
197
              000000
                                           SDLOW:: .WORD
198
199
                                                     TABLE · USED · IN · CONVERSION · FROM · ASCII · HEX · TO BINARY ·
200
201 000276
202
                                           TRTBL::
              0003561
                                                               . +60
203 000356
                 000
                           001
                                     002
                                                     .BYTE
                                                              0,1,2,3,4,5,6,7,8.,9.
              0003777
204
                                                              TRTBL+101
205 000377
                  012
                           013
                                     014
                                                     .BYTE
                                                              10.,11.,12.,13.,14.,15.
206
207
              0004751
                                                              TRTBL+177
208
                                                     TBALE USED IN CONVERSION FROM BINARY TO ASCII HEX
209
210 000475
211
                                           TRTBL2:: .ASCII ∕0123456789ABCDEF⁄
                                                     .EVEN
```

QMAIN.

```
QMAIN.
                    MACRO-M1110 27-MAR-80 15:17 PAGE_8
                                                                                   Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
          213
214
215
216
217
218
219
                                                                                                                         FIRST-LEVEL-CONTROL-TABLE-
PROCESSOR-MNEMONICS-AND-ASSOCIATED-QMAIN-SUB-MODULE
                                                                                                                         ADDRESSES
          220
                    000516
                                                                                                     FTBL:
          221
222
                    000516
                                                                     122
                                                                                                                           .ASCII
                                                                                                                                              ZMP Z
                                                                                                                                                                                                          :MATCH REPORT PROCESSOR
                    000520
                                        000000G
                                                                                                                          .WORD
                                                                                                                                             MRP.
          223
                    000522
                                                103
                                                                     120
                                                                                                                                             ZCPZ
CP
                                                                                                                                                                                                          ;CONTROL · PROCESSOR
                    000524
                                        000000G
                                                                                                                           .WORD
          225
226
                    000526
                                                                     103
                                                                                                                          .ASCII
                                                                                                                                              ZBCZ
                                                                                                                                                                                                          ; BUS · CONTROL · ELEMENT
                                        000000G
                    000530
                                                                                                                          .WORD
                                                                                                                                             BCE
                    000532
                                                128
                                                                     120
                                                                                                                          .ASCII
                                                                                                                                              /PP/
                                                                                                                                                                                                          : PIPELINE · PROCESSORS
           228
                    000534
                                         000000G
                                                                                                                          .WORD
           229
                    000536
                                                 123
                                                                     120
                                                                                                                                              28P 2
                                                                                                                                                                                                          ;SUBDOCUMENT PROCESSOR
           230
                    000540
                                        000000G
                                                                                                                          .WORD
                                                                                                                                                                                                                                                                           SPS.
          231
232
233
                    000542
                                                105
                                                                     130
                                                                                                                          .ASCII
                                                                                                                                              ÆX/
                                                                                                                                                                                                          :FXIT-
                    000544
                                        0023701
                                                                                                                          .WORD
                                                                                                                                             EXIT
                                        900006
                                                                                                     FHUM
                                                                                                                                              <.-FTBL>/4
          234
235
236
237
                                                                                                                                                                                                                                                                                   ្ន
                                                                                                                         PRINT-LINE
                                                                                                                                                                                                                                                                       24
          238
239
240
                    000546
                                                015
                                                                    012
                                                                                                                           .BYTE
                                                                                                                                              15,12
                                                                                                                                                                                                          PRECEDE PRINT LIME
                   000550
                                                                                                     PRINT::
                                        000116
                                                                                                                          .REPT
                                                                                                                                             78.
          241
                                                                                                                          .BYTE
                                                                                                                                             40
          242
                                                                                                                          .ENDR
          243
244
          245
                                                                                                                         TABLE · OF · MESSAGES ·
          246
          247
          248
                    000666
                                                000
                                                                                                                          .BYTE
                                                                                                                                             Й
          249
                                                                                                                                             15,12,15,12
/EXIT-HOR-DEBUGGING-AIDS/
                    000667
                                                015
                                                                    012
                                                                                        015
                                                                                                                          BYTE
          250
                    000673
                                                105
                                                                    130
                                                                                                                          .ASCII
                    000722
                                                015
                                                                   012
012
                                                                                        000
                                                                                                                                              15,12,0
          252
                    000725
                                                015
                                                                                                                          .BYTE
                                                                                                                                              15.12
          253
                    000727
                                                                                         115
                                                                                                                          .ASCIZ
.BYTE
                                                                                                                                              /TIME:OUT:ON:FREE:RUN/
          254
                    000754
                                                015
                                                                    012
                                                                                                                                             15.12
          255
                    000756
                                                105
015
                                                                   116
012
                                                                                         104
                                                                                                                          .ASCIZ
                                                                                                                                             ZEND OF FILE REACHEDZ
                                                                                                                          .BYTE
          257
258
                                                                                                                                             ZEND OF MEMORY REACHED/
15.12
                    001004
                                                105
                                                                    116
                                                                                         104
                                                                                                                          .ASCIZ
                                                015
105
                    001032
                                                                    012
                                                                                                                          .BYTE
                    001034
                                                                                       124
015
                                                                                                                                              ENTER ANY CHARACTER TO EXIT LOOP/
                                                                    116
                                                                                                                          .ASCIZ
          260
                   001075
                                                015
                                                                    012
                                                                                                                         .BYTE.
                                                                                                                                              15, 12, 15, 12, 15, 12
          261
                   001103
                                                110
                                                                    101
                                                                                                                                             /HARDWARE QUERY RESOLVER MANUAL DEBUGGING AIDS/
          262
                   001160
                                                015
                                                                   012
012
                                                                                       000
                                                                                                                          .BYTE
                                                                                                                                              15,12,0
                    001163
                                                015
                                                                                                                          .BYTE
                                                                                                                                              15.12
          264
                   001165
001205
                                                                   116
012
116
012
                                                                                       126
                                                                                                                                             /INVALID COMMAND/
15.12
                                                                                                                          .ASCIZ
          265
                                               015
111
                                                                                                                          BYTE
                   001207
                                                                                       126
                                                                                                                                             /INVALID-LOOR, OPTION
                                                                                                                          .ASCIZ
                                                                                                                                                                                                   LIMITS AL
                                                                                  | 15 | 15 | 12 | 126 | 15 | 12 | 126 | 15 | 12 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 |
         267
                   001233
                                               015
         268 001235
                                               111
                                                                   116
012
         269
                   001271
                                               015
                                                                                                                                                               CIA-RDP85-00514R000200020001-3
```

```
QMAIN.
                R0-M1110 27-MAR-80.15:17 PAGE-8-1
Approved For Release 2005/07/11 IA-RDP85-00514R000200020001-3
     270 001273
271 001327
272 001331
                                     116
                                                126
                                                                   .ASCIZ-
                                                                             /INVALID LOWER MEMORY LIMITS/
                          015
                                     012
                                                                  .BYTE
                                                                             15,12
                                     116
012
116
                          111
                                                                             /INCORRECT COMMAND CHARACTER COUNT/
                                                103
                                                                   .ASCIZ
     273 001373
274 001375
275 001425
                          015
                                                                   .BYTE
                                                126
                                                                   .ASCIZ
                                                                             ZINVALID MEMORY MNEMONICZ
                                     012
116
012
                          015
                                                                  .BYTE
                                                                             15, 12
     276
277
278
          001427
                          111
                                                                             /INVALID-REGISTER-MNEMONIC/
                                                126
                                                                   .ASCIZ
          001461
                          015
                                                                  .BYTE.
.ASCIZ
                          111
015
115
                                     116
012
111
          001463
                                                126
                                                                             /INVALID-NUMERIC-VALUE/
     279
          001511
                                                                  .BYTE
                                                                             15, 12
     280
                                                123
                                                                   .ASCIZ
                                                                             /MISSING OPERAND/
                          015
115
015
116
015
     281 001533
282 001535
283 001555
                                     012
                                                                  .BYTE.
.ASCIZ
                                                                             15,12.
/MISSING.COMMAND/.
15,12.
                                                123
                                     012
117
                                                                  .BYTE
     284
          001557
                                                116
                                                                   .ASCIZ
                                                                             NON-EXISTENT PROCESSOR/
     285 001606
286 001610
287 001665
288
                                     012
                                                                             15,12

PROCESSOR MNEMONIC MUST PRECEED NEXT COMMAND/
                                                                   .BYTE
                          120
377
                                     122
                                                117
                                                                  .ASCIZ
                                                                  .BYTE .
EVEN .
LIST .
                                                       ASCIZ::
     289
290
291
292
                                                                             BEX-
                                                                             CND
     293
294
                                                                  COMMAND.LINE MACRO
     295
     296
297
          001666
                                                                             GCMLB$ 2,.GCMBUF,CMILUN
          002174
                                                                  FSRSZ$
```

```
AND WARRANT
QMAIN-
          MACRO M1110 27-MAR-80 15:17 PAGE 9
                                           Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     299
     300
301
                                                               ENTER · HERE ·
     302
     303
     304 002174
                                                    START:
                                                                                                         ; ISSUE \cdot INFORMATION \cdot MESSAGE _{\perp}
     305
          002174
                                                               CALL
                                                                         OUT1
     306
          002200
                     016767
                               000000G-175576
                                                                         $TKTCB, TSKTCB.
                                                                                                        :SAVE: MY: TCB:
:SAVE: VECTOR: AT: 274
:MOVE: IN: MY: INTERRUPT: HANDLER: ADDR:
                                                               MOV.
                               000274 175572
003330 000274
     307
          002206
                     013767
                                                               MOV.
                                                                         @#274.OLDVEC
     308 002214
                     012737
                                                                         #BPTISR,@#274
     309
     310
                                                               START.OFF.WITH.MASTER.RESET, NO-CLOCKS.IN.CSR.#1
     311
     312-002222-
313-002226
                     R12746
                                177777
                                                               MOV
                                                                         #177777.-(SP)
                                                                                                         :CLEAR - CSR1
                     012746
                               000010
                                                               MOV.
                                                                         \#Q\$RSET_*-(SP)
                                                                                                         ;SET-RESET
     314
          002232
                                                               CALL
                                                                         CSR1
                                                                                                         : RESET - HOR
     315 002236
316 002242
                     012746
                               000010
                                                               MOV.
                                                                          #Q$RSET,-(SP)
                                                                                                         :CLEAR - RESET -
                                                                                                        #SET NO.CLKS
#MOVE.TO.CSR1
#REINHIBIT FAL.PROCEESOR.
                     012746
                                176000
                                                               MOV-
                                                                         #<Q$NCLK>,-(SP)
                                                                                                                                               317
          002246
                                                               CALL
                                                                         CSR £
          002252
002256
002262
     318
319
                     012746
                               000040
                                                               MOV
                                                                         #Q$CLR,-(SP)
                                                               CALL
                                                                         PPCR.
     320
                     012746
                               000000
                                                               MOV-
                                                                         #S$CLR,-(SP)
                                                                                                         ;CLEAR · SP · ADDRESS SELECT
          002266
                                                                         SPCR
                                                               CALL
     322
     323
324
                                                               PUT OUT INITIAL PROMPT. LOCATE 2-CHAR PROCESSOR/COMMAND MNEMONIC.
                                                               EG. IF THE COMMAND LINE READS: 
>MR LD MD 0
LOCATE THE 'MR'
      325
     327
328
                                                                         MATCH REPORT PROCESSOR
CONTROL PROCESSOR
BUS CONTROL ELEMENT
PIPEL INED PROCESSORS
                                                               MR
                                                               CP
                                                               ВC
     331
                                                               PP
     332
                                                                         SUBDOCUMENT PROCESSOR
     333
                                                               FX
                                                                         EXIT DEBUGGING AIDS (COMMAND)
      335
          002272
002272
002300
      336
                     012767
                               020040: 177550
                                                               MOV
                                                                          #20040.GCMBLK+G.DPRM+2: ;CLEAR:PROCESSOR:NAME:
      337
                                                                         GCONLY.
FIND
                                                               CALL
                                                                                                         : ISSUE - GCML
      338
          002304
                                                               CALL
                                                                                                         #FIND THE PROCESSOR MNEMONIC

#OK CONTINUE

#NOTHING IN COMMAND LINE
          002310
002312
      339
                     103003
                                                               BCC
      340
                                                               CALL
                                                                         FRR2
      341
           002316
                     000765
                                                               BR
                                                                         RESEL
          002320
002324
                     022700
001403
     342
                               000002
                                                     1$:
                                                               CMP
                                                                          #2,R0
                                                                                                         ; COMMANDS - ARE - 2 - CHARS -
      343
                                                               BEO.
                                                                         COMXX
      344
          002326
                                                               CALL
                                                                                                         ; INCORRECT CHAR COUNT: ; TRY AGAIN
                                                                         ERR8
     345
          002332
                     000757
                                                                         RESEL
      346
      347
      348
                                                               TOP · OF · PROCESSOR · LOOP ·
     349
350
                                                               MATCH PROCESSOR NAME AGAINST TABLE OF NAMES + CONTROL ROUTINE
                                                               ADDRESSES:
     351
     352
                                                               R1 -> PROCESSOR MHEMONIC IN THE COMMAND LINE
     353
     354
          002334
                   012700 000006
                                                    COMXX:: MOV-
                                                                         #FHUM, RØ
                                                                                                         :R0 = NUMBER OF PROCESSORS
```

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可以对外的人的人,但

QMA IN O-M1110 27-MAR-80 15:17 PAGE-9-1
Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3 356 002340 357 002344 #R2--> TABLE-OF-PROCESSOR: MNEMONICS-#FIND-MATCH-IN-TABLE #OK, CONTINUE: #COMMAND-NOT-IN-TABLE 012702 - 000516 MOV. #FTBL,R2. 357 CALL. SCAN 358 002350 103005 BCC -3\$ ERR2 358 002350 359 002350 360 002356 361 002362 362 363 364 365 366 CALL . CALL ERR1 :WHAT. TO DO NEXT. :TRY AGAIN 000743 BR RESEL . $\label{transfer} TRANSFER \cdot CONTROL \cdot TO \cdot ONE \cdot OF \cdot THE \cdot QMAIN \cdot SUB + MODULES \\ FOR \cdot FURTHER \cdot COMMAND \cdot LINE \cdot PARSING$ 367 368 369 R1 -> SUB-MODULE (CONTROL ROUTINE) ADDRESS 370 002364 000171 000000. 3\$: .IMP -@(R1) 371 372 373 374 375 EXIT-PROGRAM 376 002370 377 002370 378 002376 379 002402 016737 175412 000274 MOV. OLDVEC,@#274 :RESTORE ORIGINAL VECTOR CONTENTS CALL ENDTST. : PUT · OUT · END · OF · RUN · MESSAGE · EXIT\$S.

```
MACRO M1110 27-MAR-80 15:17 PAGE 10 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
QMAIN.
      381
382
383
                                                                         ROUTINE.TO.PLACE.A.VALUE.INTO.CONTROL/STATUS.
                                                                         REGISTER 1 (176420).
      385
386
                                                                         READ THE CURRENT VALUE OF CSR1. CLEAR THE BITS AT 4(SP) IN A CSR1 WORK AREA, SET THE BITS AT 2(SP) IN THE SAME WORK AREA, RE-WRITE CSR1.
      388
      389
      390
                                                                         2(SP)
                                                                                     - BITS-TO-BE-SET-IN-CSR1
- BITS-TO-BE-CLEARED-IN-CSR1
                                                                         4(SP)
      393
394
            002410
                                                                                                                        GET THE CURRENT VALUE
CLEAR FIRST
THEN SET
NOW RETURN IT
MOVE RETURN ADDR TO TOP OF STACK
BUMP STACK POINTER PAST ARGS
                                                             CSR1::
            002410
                                    176420
                                                 175420
                                                                        MOV-
BIC
BIS-
                                                                                     QR$CR1.APLACE
      397 002416
398 002424
                        046667
                                    000004
                                                 175412
                                                                                     4(SP),APLACE
                                    000002
175400
                                                 175404
                        056667
      399 002432
                        016767
                                                 176420
                                                                         MOV-
                                                                                     APLACE, QR$CR1
      400 002440
                        011666
                                    000004
                                                                                     (SP),4(SP)
(SP)+,(SP)+
                                                                         MOV-
      401 002444
                        022626
                                                                         CMP
      402 002446
                                                                         RETURN
```

THE STATE OF THE PARTY

QMAIN. 27-MAR-80 15:17 PAGE 11 Approved For Release 2005/07/11 IA-RDP85-00514R000200020001-3 0 · M1110 404 405 406 407 CALL HARDWARE QUERY RESOLVER LOADER. 408 409 ********** NOTE · *********** WHEN ON THE NPIC SYSTEM DO NOT USE CL IF CCIN AND CCOUT 410 411 ARE - RUNN ING -411 412 413 414 415 416 002450 417 002450 418 419 420 421 002462 422 ĆL:: CLEAR GLOBAL EVENT FLAG CLEF\$S⋅ #EFN.33 REQUEST-LOADER-RQST\$S: #LOADER: 422 423 424 425 002524 426 002536 WAIT-FOR- LOADER: TO-SET-EVENT-FLAG-WTSE\$S #EFN.33 RETURN

```
QMAIN.
           MACRO M1110 27-MAR-80.15:17 PAGE:12
                                                 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     428
429
                                                                       SET-UP.BEFORE PROMPTING ON ANY 'LD' COMMAND OR BEFORE EXECUTING ANY 'PR' COMMAND.
CALLED BY ROUTINES IN MMLD, MMPR, CPLD, CPPR, PPLD, PPRR, THE FIELDS SET UP HERE ARE USED IN THE OMAINS PROMPTING SUBROUTINE PDATA AND THE PRINT ROUTINE PROMPT.
     430
                                                                                                                                                                            The Voy
      431
     432
     433
     434
     435
     436
437
                                                                        INPUT:
                                                                                   LOAD/PRINT-START-ADDRESS
LOWER-MEMORY-LIMIT-
UPPER-MEMORY-LIMIT-
                                                                        2(SP)
                                                                        4(SP)
     439
                                                                        6(SP)
     449
     441
                                                                        OUTPUT:
                                                                       UNITED :
INCYAL - VALUE BY WHICH MEMORY ADDRESS INCREMENTS
MEND - ADDRESS OF LAST WORD IN MEMORY TO BE LOADED PRINTED.
RSPCNT - NUMBER OF WORDS TO EXPECT IN COMMAND LINE (MEMORY WIDTH)
     442
      443
     444
     445
      446
                                                                       G-BIT-CLEAR
C-BIT-SET-
                                                                                                NO-ERROR-(START-ADDRESS-IS IN-RANGE)
ERROR-IN-RANGE-
      447
     448
      449
     450
                                                                        MEMORY.
                                                                                                INCVAL
                                                                                                                       RSPCNT
     451
                                                                        MM
     452
                                                                        MD
      453
     454
                                                                        CD
     455
                                                                        HL
                                                                                                2
     456
     457
                                                                        QW
     458
                                                                        ΩL
     459
                                                                        FΡ
     460
     461
                                                                        QR
     462
                                                                        ũ0
     463
                                                                        04
     464
                                                                        ũ2
     465
                                                                        ūΧ
     466
                                                                       QB
     467
                                                                        SR
     468
                                                                        Si
     469
     470
     471
     472 002540 473 002546
                       012767
                                   000004
                                               175434
                                                           BUFS4::
                                                                       MOV
                                                                                    #4.RSPCNT
                                                                                                                        :NUMBER OF WORDS TO PROMPT
                       012767
                                   000001
                                               175424
                                                                        MOV
                                                                                   #1.INCVAL
                                                                                                                        ; BUFFERS - INC - BY - 1
     474
                       000433
                                                                       BR
                                                                                   SET
     475
          002556
                       012767
                                               175416
                                                           BUFS3::
                                                                       MOV
                                                                                    #3,RSPCNT
                                                                                                                       :NUMBER:OF WORDS:TO:PROMPT :BUFFERS:INC:BY:1
     476
          002564
002572
                       012767
                                   000001
                                               175406
                                                                       MOV.
                                                                                   #1, INCVAL
SET.
     477
                       000424
           002574
                       012767
                                                                                                                       :PROMPT-2-WORDS-
:BUFFERS-INC-BY-1
                                   000002
                                               175499
                                                           BUFS2::
                                                                       MOV
                                                                                    #2,RSPCNT
     479
          002602
                       012767
                                   000001
                                               175370
                                                                                   #1.INCVAL
SET:
                                                                       MOV.
     480 002610
                      000415
012767
                                                                       BR
          002612
     481
                                   000001
                                               175362
                                                           BUFSET::
                                                                        MOV
                                                                                    #1.RSPCNT
                                                                                                                 BUFFERS THE BY
     482
          002620
                       012767
                                   000001
                                               175352
                                                                       MOV.
                                                                                    #1.INCVAL
                       000406
    483 002626
484 002630
                                                                       BR
                                                                                   SET.
                      012767
                                   000001
                                                 75344 BUFSM:: MOV #1,RSPCNT
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                                                          BUFSM::
                                                                                              CIA-RDP85-00514R000200020001-3
```

QMAIN. MOSSO	M1110 27	7-MAR-80 15:17 Appro	PAGE · 12+1 ved For R	elease 20	005/07/11 3 :IA-RD	P85-00514R000200020001-3
485 002636 486	012767	000002 175334		MOV.	#2,INCVAL	:BUFFERS INC BY 2
487 002644 488 002652	. 001003	177777: 175324		GMP - BNE -	#-1,MEND 10\$	MEMORY.END.ADDR.SET UP.
489 002654 490 002662 491 002670 492-002672 493 002676	· 026766 · 103003	000004 175314 175304 000002		MOV: CMP: BHIS: CALL: BR	4(SP),MEND, MSTRT,2(SP) 1\$ ERR9 BUFCX2.	:SET-END-ADDR-=-MEMORY-UPPER-LIMIT- :IS-LOAD-ADDRESS-IN-RANGE-(LOW) :OK. CONTINUE- :OUT-OF-RANGE-
494 002700 495 002700 496 002710 497 00271	026766 101403 000415	175272: 000004	1\$:	CMP · BLOS · CALL · BR	MEND,4(SP) 2\$ ERR10 BUFCX2	:IS ADDR IN RANGE CHIGHY : *** :YES, CONTINUE :OUT OF RANGE
498 002716 - 499 00272 500 002726 501 002733 502	101403	175250 175252	_,	CMP · BLOS · CALL · BR	MSTRT, MEND 3\$ ERR10 BUFCX2	: IS-START ADDR LOWER THAN END ADDR : YES- : OUT-OF RANGE
503 002734 504 002740 505 00274	062706 000241	000004 000004	; 3\$:	MOV. ADD. CLC.	(SP),4(SP) #4,SP	:MOVE RETURN ADDRESS :ADJUST SP (FOR MEM LIMITS)
506 002746 507 002756 508 002756 509 002766 510 002762	011666 062706 000261	000004 000004	BUFCX2:	BR MOV ADD SEC RETURN	BUFXX2· (SP).4(SP) #4,SP·	RETURN MOVE RETURN ADDRESS

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          MACRO M1110 27-MAR-80 15:17 PAGE 13
                                             Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     513
     514
                                                                 PROMPTING CONTROL FOR LOADING ALL MEMORIES AND BUFFERS. READ NUMERIC DATA FROM THE COMMAND LINE, CONVERT AND STORE INTO A COMMON BUFFER, EG. IF THE INITIATING COMMAND IS:
     515
     516
     517
518
                                                                 CP>LD-CS-0
                                                                  THIS ROUTINE WILL PUT OUT A PROMPT AND EXPECT 4 NUMERIC
                                                                  VA_UES IN RETURN:
     520
                                                                 >0000 0000 0000 0000
     521
522
                                                                 THIS ROUTINE CONVERTS THESE ASCII HEX VALUES INTO BINARY
                                                                 AND STORES THEM INTO DATA1, DATA2, DATA3, DATA4
                                                                 524
525
     526
     527
     528
529
                                                                 OUTPUT:
                                                                 WWORDS (DATA1, DATA2, DATA3, DATA4) DEPENDING UPON RSPONT
     531
     532
                                                                 G-BIT CLEAR, V-BIT CLEAR
C-BIT CLEAR, V-BIT SET
C-BIT SET, V-BIT CLEAR
                                                                                                            NORMAL·RETURN:
⟨CR⟩ RESPONSE:TO:PROMPT<sup>(A)</sup>
     533
     534
                                                                                                             END.OF.MEMORY.OR.CONVERSION.
     536
537
                                                                 REGISTERS 1, 4, 5 DESTROYED.
     538
     539
          002764
                                                                                                                                   PDATA::
          002764
002772
002774
     540
                     026767
                                1752042 175204
                                                                 CMP
                                                                            MSTR2,MEND
                                                                                                             :UPPER · MEMORY · LIMIT · REACHED
     541
                     101403
                                                                                                             : NO. CONTINUE:
                                                                 BLOS
                                                                            105
     542
                                                                 CALL
                                                                            ENDMEM.
     543
          003000
                     000460
                                                                 BR
                                                                                                             SET CARRY AND EXIT
     544
     545 003002
                                                                                                            :PREPARE TO PRINT ADDRESS
:POINT TO PRINT LINE
:CONVERT ADDRESS
:PRINT OUT ADDRESS
                     016701
                                175166.
                                                                 MOV-
                                                                            MSTR2.R4
     546
          003006
                     012705
                                0005501
                                                                            #PRINT.R5
                                                                 MOV.
     547
          003012
                                                                 CALL
                                                                            UNPK
     548
          003016
                                                                 CALL
                                                                            CONSOL
     549
     550
          003022
                     012767
                                020040
                                           177016
                                                                            #20040.GCMBLK+G.DPRM+2*
                                                                 MOV-
                                                                                                            :ERASE · CR · AND · LF ·
:ERASE · PROCESSOR · MNEMONIC ·
     55 i
          003030
                     012767
                                020040
                                           177012
                                                                 MOV.
     552-003036
                                                                 CALL
                                                                            GCONLY.
                                                                                                             : PROMPT
     553
                     112767
          003042
                                000015
                                           176776
                                                                            #15.GCMBLK+G.DPRM-
#12.GCMBLK+G.DPRM+1
                                                                 MOVB
                                                                                                             :RESTORE CR
          003050
     554
                     112767
                                000012
                                                                 MOVB
                                                                                                             :RESTORE LF
          003056
     555
                                                                                                            RESTORE LF
LOCATE FIRST DATA WORD IN COMMAND LINE
CONTROL FIRST DATA WORD IN COMMAND LINE
WORDS FROM COMMAND LINE GO INTO THIS TABLE
RUMBER OF WORDS TO EXPECT
CONVERT WORD TO BINARY
OK CONTINUE
                                                                 CALL
                                                                            FIND
     556
          003062
                     103424
                                                                 BCS.
                                                                            \mathsf{PDVX}
     557
     558
          003064
                     012705
                                000206*
                                                                 MOV
                                                                            #WWORDS,R5
     559
          003070
                     016704
                                175106
                                                                            RSPCNT,R4
                                                                 MOV.
     560 003074
                                                                 CALL
                                                                            PACK
     561
          003100
                     103003
                                                                 BCC
                                                                            3$
          003102
                                                                 CALL
                                                                            ERR4
                                                                                                             ; "INVALID · NUMERIC · VALUE ?
                    000415
016725
005304
     563 003106
                                                                                                            AND EXIT

MOVE WORD TO TABLE

SUB-FROM LOOP COUNT

FIND NEXT WORD
                                                                 BR
                                                                            PDCX
     564
         003110
                                174716
                                                                 MC7.
                                                      3$:
                                                                            BINWD, (R5)+
     565
         003114
                                                                DEC
                                                                            R4
     566 003116
                     001414
                                                                 BEQ
                                                                           PDCCX-
     567
         003120
                                            CALL FIND FIND FIND HEXT WORD.

800 2$ 10K CONTINUE.

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    568 003124
                    103363
```

QMAIN. 0 M1110 27-MAR-80 15:17 PAGE 13-1 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 569 003126 570 003132 571 572 003134 573 003134 574 003140 575 003142 576 003144 577 003146 578 003150 579 003152 580 003154 CALL BR ERR3 PDCX :'MISSING OPERAND: 000403 PDVX: 000241 CLC SEV BR 000262 . ;INDICATE < CR> RESPONSE. 000405 000242 000261 PDDXPDCX: SEC. :END.OF.MEMORY.OR.CONVERSION.ERROR 000402 BR CLC: CLV: PDDX 000241 000242 PDCCX: PDDX: RETURN.

```
QMAIN-
            MACRO M1110 27-MAR-80 15:17 PAGE 14
                                                   Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      582
      583
                                                                          COMMON PRINT ROUTINE THIS ROUTINE CONVERTS VALUES IN THE FIELD WWORDS TO ASCII HEX (DEPENDING ON RSPONT) AND PRINTS THEM (TT0)
       584
      585
      586
       587
      588
                                                                                                   - WHEN LOOP OPTION IS IN EFFECT, PRINT 1 WORD ONLY CONTROL PRINTING OF 1 WORD WHEN #OUT IS SET NUMBER OF WORDS TO PRINT (SEE "BUFSET" RTN)
- MEMORY ADDRESS (SEE "BUFSET")
- MEMORY WORDS (DATA1, DATA2, DATA3, DATA4)
      589
                                                                           #OUT.FLAG.
#ONCE.FLAG.
      590
      591
                                                                           RSPCNT.
      592
                                                                          MSTR2
      593
                                                                          WWORDS.
      594
      595
                                                                          REGISTERS 1, 3, 4, 5 DESTROYED
      596
      597
      598
            003156
      599
            003156
                         032767
                                     002000
                                                 174650
                                                                          BIT
                                                                                       #OUT,BASE
                                                                                                                            OUTPUT-CONTROLON-
NO. SKIP-OUTPUT-CONTROLON-
ONE-LINE-PRINTED
      600
            003164
                         001407
                                                                          BEQ
      601
           003166
003174
                        032767
                                     000100
                                                 174640
                                                                          BIT
                                                                                       #ONCE, BASE
      602
                        001026
                                                                                       PRDX
                                                                          BNE
                                                                                                                            ;YES, EXIT
      603
            003176
                        052767
                                     000100.
                                                 174630
                                                                                       #ONCE, BASE
      604
      605 003204
606 003210
                        016701
                                     174764
                                                              10$:
                                                                          MOV.
                                                                                       MSTR2,R1
                                                                                                                            :FIRST CONVERT ADDRESS TO ASCII: :POINT TO PRINT LINE
                                                                                       #PRINT, R5
                        012705
                                     0005501
                                                                          MOV
      607
            003214
                                                                          CALL
                                                                                       UNPK
                                                                                                                            :PERFORM CONVERSION
      608
      609 003220
                        012704
                                     000206*
                                                                          MOV
                                                                                       #WWORDS,R4
                                                                                                                            :POINT: TO: WORDS: FOR: PRINTING:
:NUMBER: OF MEM: WORDS TO: PRINT:
:ADVANCE: PRINT: LINE: POINTER:
      610 003224
611 003230
612-003234
                        016703
062705
                                     174752
                                                                          MOV.
                                                                                      RSPCNT, R3
                                     000002
                                                                                       #2,R5
                                                                          ADD.
                        012401
                                                                          MOV.
                                                                                       (R4) + R1
                                                                                                                            LOAD ONE WORD:
CONVERT IT TO ASCII
      613 003236
                                                                          CALL
                                                                                       UNPK
      614 003242
615 003244
                        005303
                                                                          DEC -
                                                                                      R3
                                                                                                                           :DEC WORD COUNT:
REPEAT
     616 003246
617
                        001371
                                                                          BHE.
                                                                                       1.5
                                                                          CALL
                                                                                      CONSOL
                                                                                                                            :PRINT LINE
      618 003252
                                                             PRDX:
                                                                          RETURN -
```

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```
QMA IN:
                0 M1110 27-MAR-80 15:17 PAGE 15
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     620
621
622
623
                                                                GET · COMMAND · LINE · FROM · TERMINAL ·
                                                                625
     626
627
628
     629
                                                                SEE 'FIND' SUBROUTINE FOR THE USE AND UPDATING OF THESE FIELDS.
     630
     631
632·003254
633 003254
                                                      GCONLY::
                     012700
                                                                                                           :POINT.TOPCOMMAND.LINE BUFFER:
:NUMBER OF WORDS IN BUFFER:
:CLEAR COMMAND LINE:
:FINISHED?
                                000040*
                                                                MOV.
                                                                           #GCMBUF,R0
     634 003260
                     012701
                                000051
                                                                MOV.
                                                                           #41 .R1
     635 003264
636 003266
                     005020
                                                      1$:
                                                                CLR
                                                                            (RØ)+
                     005301
                                                                DEC
                                                                           R4
     637
          003270
                     001375
                                                                BHE
     638
639 003272
640 003306
641 003314
                                                                                                            ; NO -
                                                                GCML$
MOV∙
                                                                           #GCMBLK:
G.CMLD(R0).GCMLEN:
#GCMBUF.GCMPNT
#GCMBUF.R1
                     016067
                                000146 ·
                                           174646
                                                                                                           ;SAVE-LENGTH:
;INIT-COMMAND-LINE-POINTER
;POINT-R1 TO-COMMAND LINE-
                     012767
                                           174642
                                                                MOV.
     642 003322
643 003326
                     012701
                                0000401
                                                                MOV:
RETURN
```

```
QMAIN-
            MACRO M1110 27-MAR-80 15:17 PAGE 16
                                                   Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      645
      646
                                                                          INTERRUPT SERVICE ROUTINE TRAP INTERRUPTS FROM HOR THROUGH VECTOR ADDRESS 274 SET EVENT FLAG 3
MICROCODE (MRP AND CP) DEBUGGING ROUTINES WILL READ CSR #2 AND DECODE THE INTERRUPT
      647
      648
      649
      650
      651
652
653
654 003330
                                                              BPTISR:
      655 003330
656
                                                                           SAVE -
                                                                                       R0,R1,R2,R3,R4,R5
      657
            003344
                         016705
                                     174434
                                                                          MOV:
MOV:
CALL:
                                                                                                                            :LOAD · MY · TGB · www risk:
:EVENT · FLAG · TO · BE · SET ·
                                                                                       TSKTCB,R5
      658 003350
659 003354
660 003360
                         012700
                                     000003
                                                                                       #EFN.3.R0
$CEFI
R0.(R1)
                         050011
                                                                          BIS.
                                                                                                                            ;SET.LOCAL FLAG:
;DECLARE:SIGNIFICANT EVENT:
      661 003362
                                                                          CALL.
                                                                                       $DRDSE ⋅
      662.
663 003366
                                                                          RESTOR -
                                                                                      R0,R1,R2,R3,R4,R5
      664 003402 000002
                                                                          RTI.
```

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OMA IN
              O M1110 27-MAR-80 15:17 PAGE 17
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    666
    667
    668
                                                         DETECT-LOOP-INDICATOR-IN-COMMAND LINE.
    669
670
    671
         003404
                                                LOOPR::
    672 003404
673 003410
                                                          CALL
                                                                   FIND
                                                                                                :LOCATE · RESPONSE
                   103437
                                                          BCS
                                                                   LOOPX
                                                                                                ;NOTHING THERE, EXIT
;LOOP INDICATOR
    674 003412
                   122711
                             000114
                                                          CMPB
                                                                   #fL,(R1)
    675
         003416
                                                                   HANG
                                                          BEQ.
                                                                                                OK, CONTINUE.
    676
677
678
         003420
                                                                   ERR11
                                                                                                : WRONG - CHARACTER - TOTAL
                                                          CALL
                   000431
         003424
                                                         GIVE DIRECTIONS FOR EXITING LOOP
    679
                                                :
    680
                                                          ISSUE-QIO-(ATTACH) FOR UNSOLICITED-CHARACTER-INTERRUPT-
    681
    682 - 003426
                   852767
                            999299
                                      174499
                                                HANG::
                                                         BIS
BIS
                                                                   #ASTFLG, BASE.
                                                                                                :SET-FLAG-FOR-QIO-ISSUED
    683
         003434
                   052767
                            000004
                                      174372
                                                                   #LOOP,BASE
                                                                                                ;SET-FLAG-FOR-LOOP
    684
         003442
                                                         CALL
                                                                   STOP
                                                                                                GIVE DIRECTIONS FOR STOPPING TEST
    685
     686
                                                         QIO$S.
                                                                   #IO.ATA,#LUN.TT,,,,<#AST>
    687
688 003510
                                                LOOPX:
     689
         003510
                                                         RETURN.
     690
    691
     692
                                                         HANG-QIO-FOR INTERRUPT FROM-TERMINAL (BREAKPOINT-RTMS)
     693
     694
695
         003512
                                                HANG2::
     696
         003512
                   052767
                            000200
                                                         BIS
                                                                   #ASTFLG,BASE.
                                                                                                :SET.FLAG.FOR.QIO.ISSUED.
     697
         003520
                                                         DIDSS
                                                                   #IO.ATA, #LUN.TT, , , , < #AST2>
     698
         003562
                                                          RETURN.
     699
     700
     70 i
                                                         KILL-AST-(BY DETACH) DETACH-BECAUSE-THE-LOOP-QIO-ATTACH-AND-THE BREAKPOINT-QIO-ATTACH-EACH-HAS-ITS-OWN-AST.
     702
703
     704
     705
706
         003564
         .003564
     707
                   042767
                            000004 : 174242
                                                         BIC:
                                                                   #LOOP, BASE
                                                                                                ;CLEAR · LOOP · FLAG ·
     788
         003572
                   032767
                             000200 174234
                                                                                                ;HAS.A.QIO BEEN.ISSUED?
;NO, DO.NOT.DETACH:
;CLEAR.QIO FLAG:
                                                                   #ASTFLG,BASE
     709 003600
                   881423
                                                                   1$
     710
         003602
                                                         BIC #ASTFLG.BASE
QIOW$S #IO.DET.#LUN.TT
                            อดดวดด
                                      174224
                   042767
         003610
     712.003650
                                                1$:
                                                         RETURN.
```

QMAIN: MACRO:M1.10 27-MAR-80 15:17 PAGE: 18 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 714 715 716 717 003652-719 003655-719 003656-720 003664 721 722-723 724 003672-725 003672-726 003676 727 AST-FOR-LOOP ON-TEST-QIO-AST: MOV-(SP)+,ASTWRD. #LOOP,BASE. :GET·CHAR·OFF·STACK· :CLEAR·LOOP·FLAG· 012667 174310 174150 042767 000004 AST-FOR-BREAKPOINT-QIO ÁST2: 012667 174270 $(SP) + ASTWRD \cdot$ SETF\$S: #EFN.4 :SET-EVENT FLAG-FRO-TERMINAL-INTERRUPT-

ASTX\$S

```
0-M1110 27-MAR-80:15:17 PAGE 19
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QMAIN.
     730
731
732
                                                                          SCAN-A-TABLE FOR-A-VALID-COMMAND/MNEMONIC
                                                                           INPUT:
     733
734
735
736
                                                                          RØ = NUMBER OF ENTRIES IN COMMAND TABLE
R1 -> CHAR STRING IN GCML COMMAND LINE
R2 -> TOP OF COMMAND TABLE
      737
                                                                          OUTPUT:
      738
                                                                          R1 -> ROUTINE-THAT-GOVERNS-THE-COMMAND-(IF MATCH-WAS MADE)
R1 -> CHAR-STRING-IN-COMMAND-LINE-(IF-NO-MATCH-WAS-MADE)
R0 =-RELATIVE-POSITION OF-MATCHED-ENTRY-IN TABLE-
      739
     740
741
      742-003716
                                                             SCAN::
     743 003716
744 003720
745 003722
                        010346
                                                                         MOV
                                                                                      R3,-(SP)
                                                                                                                           :SAVE-R3
                        010046
                                                                                                                           #SAVE ** ENTRIES #$ SAVE ** POINTER ** TO ** BEGINNING ** OF ** STRING **
                                                                                                                                                                 MOV
                                                                                      R0,-(SP)
                        010146
                                                                                      R1.-(SP)
      746
      747
           003724
                                                             FHOUT1: MOV
                                                                                      (SP),R1
                                                                                                                           :POINT. TO NON-BLANK IN COMMIND LINE.
     748 003726
749 003732
                                                                                                                           **POINT - TO NON-BEHNR IN COMMAND FINE *
**NUMBER OF CHARS IN NON-BEANK FIELD *
**DOES COMMAND LINE MATCH TABLE ENTRY *
**NO TRY NEXT TABLE ENTRY *
**SUB FROM LOOP COUNT
                        012703.
                                                                                      #2,R3
(R1)+,(R2)+
                                                                          MOV-
                        122122
                                                             FHIH1:
                                                                          CMPB
     750
           003734
                        001003
                                                                          BHE
                                                                                      FNOUT2
      751
           003736
                        005303
                                                                          DEC
     752 · 003740
753 · 003742
                        001374
                                                                          BHE
                                                                                      ENIN1
                        000411
                                                                                                                           ;COMMAND FOUND IN TABLE
;ADD # UNCOMPARED CHARS TO POINTER
;THEN ADJUST TO NEXT TABLE ENTRY
                                                                                      FNMTCH-
      754 003744
                        060302
                                                             FNOUT2:
                                                                          ADD.
                                                                                      R3.R2
      755
           003746
                        005202
                                                                          INC.
                                                                                      R2.
     756
           003750
                        005300
                                                                                      RЯ
                                                                                                                            ;SUB FROM OUTER LOOP COUNT
      757
           003752
                        001364
                                                                          BNE
                                                                                      FN0UT1
                                                                                                                           : TRY-AGAIN
           003754
                        012601
                                                                                      (SP)+.R1
(SP)+.R0
                                                                          MOV-
                                                                                                                           :RESTORE - R1
     759 003756
760 003760
761 003762
                                                                          MOV.
                        012603
                                                                         MOV.
                                                                                      (SP)+,R3
                        000261
                                                                                                                           :COMMAND · NOT · IN · TABLE ·
      762 • 003764
                                                                         RETURN
     763
     764 003766
                        010201
                                                             FHMTCH:
                                                                         MOV.
                                                                                      R2,R1
#2,SP
                                                                                                                           :POINT R1 AT RTH ADDR IN TABLE, POINT TO INCOMING R0 ON STACK
           003770
003774
     765
                        062706
                                    000002
                                                                          ADD
     766
                                                                                                                           GET TOTAL # TABLE ENTRIES
GET POSITION OF MATCHED ENTRY
                        012602
                                                                          MOV:
                                                                                       (SP)+,R2-
           003776
                        160002
                                                                          SHB -
                                                                                      RØ.R2
     768 004000
                        010200
                                                                         MOV
                                                                                      R2.RA
                                                                                                                            :PUT IN RØ FOR RETURN
     769
           004002
                                                                         MOV
CLS
                        012603
                                                                                      (SP)+,R3
                                                                                                                           ; RESTORE - R3
     770
           004004
                        000241
     771 004006
                                                                         RETURN
```

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MACRO - M1110 27-MAR-80 15A17 PAGE FOR Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 QMA IN FIND THE NEXT NON-BLANK IN THE COMMAND BUFFER. THEN FIND THE LENGTH OF THE STRING THAT STARTS WITH THAT CHARACTER. 775 776 777 GCMLEN. - NUMBER.OF.UNPROCESSED BYTES.IN.COMMAND.LINE 778 779 GCMPNT- - ADDR-OF-NEXT UNPROCESSED-POSITION-IN-COMMAND-LINE: 780 R1 -> STRING, R0 = LENGTH OF STRING 78 i GCMLEN, GCMPNT-UPDATED FOR-NEXT-ENTRY-INTO THIS-ROUTINE-282 783 THIS ROUTINE IS DESIGNED TO BE ENTERED A NUMBER OF TIMES IN THE PARSING OF A COMMAND LINE. THE FIELDS GCMLEN AND GCMPNT ARE REFRESHED WHEN A NEW COMMAND LINE IS READ (SEE THE SUBROUTINE GCONLY). 784 785 786 787 788 789 790 004010 FIND:: :SAVE : R2 : #+ BYTES : REMAINING $\underline{\underline{}}$ IN : COMMAND : BUFFER : THERE : ARE : NONE : - 25791 004010 004012 010246 016701 MOV. R2,-(SP) GCMLEN,R1 MOV 174144 793 004016 001440 BEQ. FSECX. *LOAD CURRENT POINTER *LOOK FOR A BLANK *OK BUMP TO NEXT CHAR 794 004020 016702 174140 MOV-GCMPNT, R2 795 004024 122712 000040 1\$: CMPB #40,(R2) 004030 796 001403 BEQ 10\$;COMMA·IN·COMMAND·LINE ;TREAT·COMMA·AS·BLANK· ;BUMP·POINTER· 797 004032 122712 CMPB #*,,(R2) 798 004036 001004 BHE 2\$ 799 004040 105: R2· R1 005202 THO SUB FROM REMAINING LENGTH 800 004042 DEC 005301 004044 001367 BNE 802 - 004046 000424 FSECX-;NO·HON-BLANK·FOUND 803 004050 010246 2\$: MOV R2,-(SP) :TEMP SAVE POINTER: TO:BEGINNING:OF:STRING 804 :CLEAR · CHAR · COUNT 004052 005000 CLR RØ 806 004054 122712 3\$: CMPB #40.(R2) :LOOK FOR A BLANK 000040 004060 004062 4\$ #*..(R2) FOUND END OF STRING TREAT COMMAS AS BLANKS 897 001407 BEQ 808 000054 122712 CMPR 004066 001404 BEQ 4\$:BUMP-POINTER-:BUMP-CHAR COUNT-810 004070 005202 INC R2 811 004072 812 004074 005200 THE RA 005301 ; SUB · FROM · BYTES · REMAINING · DEC R1 813 004076 001366 :SAVE POINTER FOR NEXT TIME :SAVE BYTES REMAINING FOR NEXT TIME :POINTER TO BEGINNING OF STRING 815 004100 010267 174969 4\$: MOV R2.GCMPNT 004104 010167 R1.GCMLEN (SP)+.R1 816 174052 MOV 004110 MOV 817 012601 MC / 004112 012602 (SP) + R2:RESTORE R2 819 004114 000241 CLC 820 004116 RETURN. 821 004120 FSECX: MOV. :RESTORE - R2-(SP) + R2823 004122 824 004124 000261 SEC RETURN

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QMA IN .
                0 M1110 27-MAR-80 15:17 PAGE 21
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     826
     827
     828
                                                                 CONVERT.AN.ASCII.HEX.VALUE.FROM.THE.COMMAND.LINE.INTO.BINARY
                                                                LEGAL STRINGS CONTAIN FROM 1 TO 4 CHARACTERS
     839
     831
     832
                                                                RØ =:NUMBER:OF:CHARACTERS:IN:ASCII:STRING
R1 -> STRING
     833
     834
     835
                                                                                                                                     المراجعة المراجعة
     836
                                                                 THE FIELD BINWD CONTAINS THE CONVERTED VALUE
     837
     838
839 004126
                                                     PACK::
     840
          004126
                     005067
                                173700
                                                                CLR -
                                                                                                           CLEAR CONVERTED VALUE FIELD CLEAR FOR COND CODE INDICATOR
     841
          004132
                     005046
                                                                CLR
     842.004134
                                                                SAVE
                                                                           R0.R1.R2.R3.R4.R5
     843
     844
                                                                DETERMINE THE CONVERSION FACTOR (POWER OF 16) FOR
     845
                                                                THE LEFTMOST ASCII CHARACTER
     846
     847
          004150
                     922799
                                000004
                                                                           #4.R0
                                                                                                           :UPPER·LIMIT·FOR·HEX DIGITS
          004154
                     002455
                                                                BLT.
                                                                           PSECX
                                                                                                           :ERROR EXIT
     849
          004156
                     010002
                                                                                                           ;NUMBER.OF CHARS.CONTROUS.LOOP
;4 CHARS.?
                                                                MOV
                                                                           R0.R2
     858
          004160
                     022700
                                000004
                                                                CMP
                                                                           #4,R0
     851
          004164
                     001003
                                                                           1$
          004166
                     012700
                                010000
                                                                MOV.
                                                                           #4096..R0
                                                                                                           :HEX-CONVERSION-FACTOR-FOR-HIGH-ORDER-CHAR-:ENTER-LOOP-
     853
          004172
                     000416
                                                                BR
                                                                           4$
     854
          994174
                     022700
                                000003
                                                                ČMP
                                                      1$:
                                                                           #3,R0
                                                                                                           :3 CHARS ?
     855
                     001003
          004200
                                                                           2$
     856
          004202
                     012700
                                000400
                                                                                                           CONVERSION FACTOR FOR HIGH ORDER CHAR
                                                                MOV:
                                                                           #256.,R0
     857
          004206
                     000410
                                                                BR
                                                                           4$
     858
                                                                                                           :2. CHARS: 2
                     022700
          004210
                                000002
                                                                CMP
                                                     2$:
                                                                           #2,R0
          004214
                     001003
                                                                BNE
                                                                           3$
     860 004216
                     012700
                                000020
                                                                MOV
                                                                           #16..R0
                                                                                                           CONVERSION, MACTOR FOR HIGH ORDER CHAR
     861 004222
                     000402
                                                                BR
                                                                           4$
     862.004224
                     012700
                                000001
                                                     3$:
                                                                MOV-
                                                                           #1.R0
                                                                                                           :1 CHAR
     863
     864
                                                                MULTIPLY-EACH-CHARACTER'S-VALUE-BY-ITS-CONVERSION-
FACTOR: THE-CONVERSION FACTOR-IS REDUCED-BY-A-POWER:
OF 16 AS-THE ASCII-STRING-IS-SCANNED-FROM-LEFT-TO-
     865
     866
867
     868
     869
          004230
                                                     4$:
                                                                MOV.
                                                                           R1.R5
                                                                                                           ; MOVE INPUT POINTER TO R5
                                                                                                          *MOVE INPUT POINTER TO RS
*GET ASCII VALUE INTO A REG
*POINT TO TRANSLATE TABLE
*ADD VALUE OF CHARACTER
*MOVE BINARY VALUE *TO A REG
*WAS INPUT CHAR ZERO
*YES ITHS 15 OK
*WAS TABLE POSITION EMPTY
*YES TRANSLATION UNSUCCESSFUL
*NSAVE FOR DIVISION LATER
*MULT BY 16 TO SOME POWER
*ACCUM CONVERTED VALUE
*RELOAD FACTOR
     879
          004232
                     112503
                                                     HLOOP:
                                                                MOVB
                                                                           (R5) + .R3
     871
          004234
                     812784
                                000276*
                                                                MOV
                                                                           #TRTBL,R4
          004240
                     060304
                                                                ADD -
                                                                           R3,R4
     873 004242
                     111401
                                                                MOVB.
                                                                           (R4).R1
     874 004244
                     022704
                                0003561
                                                                CMP.
                                                                           #TRTBL+60,R4
     875
          004250
                     001402
                                                                BEQ.
          004252
     876
                     105701
                                                                TSTR
                                                                           R1
     877
          004254
                     001415
                                                                BEQ.
                                                                           PSECX.
          004256
                     010046
                                                     15:
                                                                MOV.
                                                                           R0,-(SP)
     879 004260
                                                                CALL
                                                                           $MUL
                     060167
     880 004264
                                173542
                                                                ADD
                                                                           RI, BINUD.
     881
         004270
                     012600
                                                                MOV
                                                                           (SP)+,R0
                                                                                                           :RELOAD FACTOR
                     012701
                                000020
                                            MDV: #16..R1 (LOAD) DIVISOR: Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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883 004276 884 004302 885 004304 886 004306 887	005302 001352 000403			:	GALL · DEC · BNE · BR	\$DIV R2∙ HLOOP∙ PCLCX∙	:REDUCE FACTOR :SUB FROM LOOP COUNT :EXIT
888 004310 889 004316 890	012766	177777	000014	PSECX: PCLCX:	MOY RESTOR	#-1.12.(SP) R0.R1.R2.R3.R4.R5	;SET-COND-CODE-INDICATOR-
891 004332 892 004334 893 004336	005726 002402 000241				TST BLT CLC:	(SP)+ 1\$;GET.COND.CODE.INDICATOR. ;DO.SEC.
894 004340 895 004342 896 004344	000401 000261			1\$: PACKX:	BR SEC RETURN	PACKX-	; AND · RETURN · · · ·

QMAIN. O-M1110 27-MAR-80 15:17 PAGE-22-Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 898 899 CONVERT.A.VALUE.FROM.BINARY.TO.PRINTABLE.FORM. R1 = WORD.TO BE.CONVERTED. R5 -> PRINT.LINE. 900 ; 901 902 903 904 004346 ÚNPK:: 905 004346 SAVE -RØ.R1.R2.R3.R4 906 907 004360 :DO LAST CHAR FIRST - NUMBER OF HEX DIGITS FOR A WORD 062705 йййййда: ADD #4.R5 908 004364 012702 000004 MOV: #4,R2 R1.R0 909 004370 010100 :SUBRTH - EXPECTS - DIVIDEND - IN - RO 910 004372 911 004376 #16..R1 \$DIV 012701 000020 1\$: MOV: :LOAD DIVIDOR CALL :POINT-TO-TRANSLATE-TABLE-:ADD-4 BIT VALUE-:MOVE-CHAR TO-PRINT-LINE-:DEC-INNER LOOP-COUNT- 477 912.004402. 012703 0004751 MOV: #TRTBL2,R3 913 004406 914 004410 915 004412 060103 R1.R3 ADD. 111345 MOVB (R3),-(R5) 005302 R2 1\$ DEC: 916 004414 001366 BNE -917 004416 918 000005 ADD #5.R5 :BUMP · PRINT · LINE · POMNTER 919 004422 920 004434 RESTOR. R0.R1.R2.R3.R4 RETURN:

```
MACRO M1110 27+MAR-80 15:17 PAGE 23
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QMAIN.
     922
923
924
925
926
                                                                  WRITE A PRINT LINE TO TTO
     927
          004436
                                                       CONSOL::
     928 · 004436
929
                                                                  SAVE:
                                                                             R0.R1
     930 004442
                     012700
012701
122741
                                 000120
                                                                  MOV-
                                                                             #80.,R0
#PRINT+78.,R1
                                                                                                              ;PRINT-BUFFER-BYTE-COUNT-
;POINT-PAST-END-OF-BUFFER-
;LOOK-FOR-A-NON-BLANK-
;OK, WRITE LINE-
;DEC-CHAR-COUNT-
     931
          004446
                                 000666
                                                                  MOV.
     932·004452
933 004456
                                 000040
                                                       1$:
                                                                  CMPB
                                                                             #40.-(R1)
                     001003
005300
                                                                  BNE .
    934 004460
935 004462
936 004464
                                                                             2$
                                                                             RØ.
                                                                  DEC
                      001373
                                                                  BNE
                                                                              1$
                     000440
                                                                  BR
                                                                             ABEND2
                                                                                                              :NO.NON-BLANKS?
     937
     938 004466
939
                                                                  QIOW$S: #IO:WVB,#LUN:TT,#EFN:1,,#STAT,,<#PRINT-2,R0>,ABEND2
                                                       2$:
                                                       ;
     940
                     012701
112721
     941 004544
                                 000550
                                                                  MOV-
                                                                             #PRINT,R1
                                                                                                               :POINT TO STRING
     942.004550
                                 000040
                                                       4$:
                                                                  MOVB.
                                                                             #40,(R1)+
                                                                                                              CLEAR LINE TO BLANKS
DEC LOOP COUNT
     943
          004554
                     005300
                                                                  DEC -
BNE -
                                                                             RØ
     944 004556
                     001374
                                                                             4$
     945
     946 004560
947 004564
                                                                  RESTOR.
                                                                             R0.R1
                                                                  RETURN.
     948
     949 004566
                                                       ABEND2: ABRT$S #MYSELF.
```

Harry Walley & B

TOTAL TOWNSTON AND

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OMA IN
               0 M1110 27-MAR-80 15 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
    951
952
                                                            WRITE TO TTO AND PROMPT
     953
     954
                                                             REGISTERS: 0, 1,2:DESTROYED:
     955
956
                                                  ENDTST::
                                                                       ERWORD
                                                                                                     ; INC · MESSAGE · INDEX ·
                    885267
                              173294
     958
          004620
          004624
                    005267
                               173200
                                                            INC
                                                                       ERMORD
     959
                                                   ENFILE: INC
          004630
                    005267
                               173174
                                                                       ERLIORD.
     960
                                                   ENDMEM:: INC
                                                                       ERWORD
     961
          004634
                    005267
                              173170
173164
                    005267
                                                   STOP::
                                                                       ERWORD
     962
          004640
                    005267
                                                             THO
                                                                       FRUORD
     963
          004644
                                                                       ERWORD
     964
                    005267
                               173154
                                                   ERR12::
                                                             THO
                                                   ERR11::
                                                             INC
                                                                       ERWORD:
                               173150
     965
          004654
                    ØØ5267
                                                   ERR10::
                                                                       ERWORD
                    005267
                               173144
     966
          994669
                                                   ERR9::
                     005267
                                                             INC
                                                                       ERWORD
     967
          004664
                               173140
                                                                       ERWORD
          004676
                     005267
                               173134
                                                   FRRR::
                                                             THC
     968
                                                                       ERWORD
                                                   ERRZ::
                                                             INC
     969
          004674
                    005267
                               173130
                               173124
                                                   ERR6::
                                                                       ERWORD
     970
          004706
                     005267
                                                                       ERWORD
          004704
                     005267
                               173120
                                                   ERR5::
                                                             INC
     971
                               173114
                                                   FRR4::
                                                             INC
                                                                       ERWORD
          004710
                     005267
                                                             INC
                                                   ERR3::
                                                                       ERWORD -
     973
          004714
                     005267
                               173110
                                                   ERR2::
                                                             INC
                                                                       ERWORD
                               173104
     974 004720
                    005267
     975
                               173100
                                                   ERR1::
                                                             IHC
                                                                       ERWORD
          004724
                     005267
     976
                                                             USE:THE:INDEX:ERWORD:TO:COUNT:UP FROM:THE:BOTTOM:OF:THE:MESSAGE:TABLE:FIND:THE:END:OF:THE:MESSAGE FIRST; THEN:THE:BEGINNING; THEN:GET:THE:LENGTH:
     977
     978
     979
      980
                                                                                                      :LOAD-LOOP COUNT-
                                                                       ERWORD,R2
#ASCIZ,R1
      981
           004730
                     016702
                               173074
                                                             MOV
                                                                                                      :POINT TO END OF MESSAGE TABLE
                                                             MOV
      982
          .004734
                     012701
105741
                               001665
                                                             TSTB
                                                                                                      :LOOK.FOR.END.OF.MESSAGE
                                                                       -(R1)
           004740
                                                   1$:
      983
      984
           004742
                                                             BNE
                                                                       1 $
                                                                       ŔŽ.
                                                                                                      :LOOP COUNT
                                                             DEC
      985
           004744
                     005302
                                                                                                     :BACK UP ANOTHER MESSAGE
:SAVE POINTER TO END OF MESSAGE
:BACK UP TO BEGINNING OF MESSAGE;
                                                             BHE
                                                                        1$
           004746
      986
                     001374
                                                             MOV
                                                                       R1.R0
      987
           004750
                     010100
           004752
                                                   2$:
                                                             TSTB
                                                                       -(R1)
                                                                       2$
                                                             BNE
      989
           004754
                     001376
                                                                                                     ;BUMP - TO - FIRST - CHAR - OF - MESSAGE
;R0 NOW - - MESSAGE - LENGTH - ______
      990
           004756
                     005201
                                                                       R1.R0
      991
           004760
                     160100
                                                             SUB
      992
                                                                        #IO.WVB,#LUN.TT,#EFN.1,,#STAT,,<R1,R0>,ABEND
                                                              QIOW$S
      993
           004762
      994
                                                                        #EFH.1
      995
                                                              CLEE$S
                                                                                                      GOOD RETURN
                                                                       STAT
      996
           005050
                     105767
                                172750
                                                              TSTB -
                                                                                                      : NO
                                                                       ABEND
                                                              BLE .
      997
998
           005054
                     003403
                                                              CLEAR · ERROR · INDEX · AND · EXIT
     1000
                                172746
           005056
                     005067
     1001
                                                              RETURN :
                                                                                                      : AND RETURN
     1002-005062
     1003
                                                             ABRT$S
                                                    ABEND:
     1004
           005064
                                                              .END
                                                                        START-
                     0021741
     1005
```

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OMO IN.
           MACRO M1110 27-MAR-80 15:17 PAGE 24-1
 SYMBOL TABLE
                                             Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
 ABEND
                                 BYTE22= 000026
BYTE23= 000027
            005064R
                                                                  BYTE74= 000112
                                                                                                   DISPGS= 100000
DMAAWR= 000005
                                                                                                                                    F.EFBK= 000010
F.EFN = 000050
 ABEND2
           004566R
                                                                  BYTE75= 000113
 ALUCKE = . 040000
                                  BYTE24= 000030
                                                                  BYTE76= 000114
BYTE77= 000115
                                                                                                   DMARRD= .000003
                                                                                                                                    F.EOBB= 000032
 ALU0E - 004000
                                 BYTE25= 000031
BYTE26= 000032
                                                                                                   DMARWR= 000004
 APLACE:
ASCIZ
                                                                                                                                    F.ERR = 000052
F.FACC = 000043
           000036RG
                                                                  BYTE78= 000116
                                                                                                   EFBUF -
                                                                                                              000014RG
           001665RG
                                  BYTE27 = · 000033
                                                                  BYTE79= 000117
BYTE8 = 000010
                                                                                                   EFN.1 = 000001 G
EFN.2 = 000002 G
 AST
                                                                                                                                    F.FFBY= 000014
           003652R
                                 BYTE28= 000034
BYTE29= 000035
BYTE3 = 000003
 ASTFLG≕ 000200 G
                                                                                                                                    F.FNAM= 000110
                                                                  BYTE80= 000120
                                                                                                                                   F.FYP=-000116
                                                                                                   EFN.3 = 000003 G
 ASTURD
           000166RG
                                                                  BYTE81= 000121
 AST2
                                                                                                   EFN.33= 000041 G
           003672R
                                 BYTE30= 000036
                                                                  BYTE82= 000122
                                                                                                   EFN.4 = 000004 G
ENBR = 010000
 A01
                                 BYTE31 = . 000037
BYTE32 = . 000040
                                                                                                                                    F.FVER= 000120
         = 010000
                                                                  BYTE83= 000123
                                                                                                                                   F.HIBK= 000004
F.LUN = 000042
F.MBCT= 000054
 BASE -
           000034RG
                                                                  BYTE84= 000124
                                                                                                  ENDMEM: 004634RG
 BCE -
        = ****** GX
000032RG
                                 BYTE33= 000041
                                                                  BYTE85= 000125
 BIHWD.
                                                                                                  ENDTST:
                                                                                                             004620RG
                                 BYTE34= 000042
                                                                  BYTE86= 000126
BYTE87= 000127
                                                                                                  ENFILE.
                                                                                                             004630RG
004724RG
 BITVAL = . 000000
                                                                                                                                   F.MBC1 = 000055
                                 BYTE35= 000043
                                                                                                   ERR1
 BIT0 = 000001
BIT1 = 000002
                                                                                                                                   F.MBFG= 000056
                                 BYTE36= 000044
BYTE37= 000045
                                                                  BYTE88= 000130
                                                                                                  ERR10
                                                                                                             004660RG
                                                                                                                                   F.NRBD= 000024
 BITi
BITi0
                                                                  BYTE89= 000131
                                                                                                  ERR11
                                                                                                             004654RG
                                                                                                                                   F.NREC= 000030
        = 002000
                                 BYTE38= 000046
                                                                  BYTE9 = 000011
                                                                                                  ERR12
                                                                                                             004650RG - 004720RG -
                                                                                                                                   F.OVBS= 000030.
 BIT11 = 004000
                                 BYTE39= 000047
BYTE4 = 000004
                                                                  BYTE90= 000132
                                                                                                   ERR2
 BIT12 -- 010000
BIT13 -- 020000
                                                                                                                                   E.ROCC = 000016
F.RATT = 000001
F.RCNM = 000034
                                                                  BYTE91= 000133
                                                                                                  ERRX
                                                                                                              004714RG
                                 BYTE40= 000050
                                                                  BYTE92= 000134
BYTE93= 000135
                                                                                                  ERR4
                                                                                                             004710RG
 BIT14 = 040000
                                 BYTE41= 000051
                                                                                                   ERR5
                                                                                                             004704RG
                                                                                                                                   F.RCTL= 000017
F.RSIZ= 000002
F.RTYP= 000000
 BIT15 = 100000
                                 BYTE42= 000052
                                                                  BYTE94= 000136
                                                                                                  ERR6
                                                                                                             004700RG
 BIT2.
        = 000004
                                 BYTE43= 000053
                                                                  BYTE95= 000137
BYTE96= 000140
                                                                                                  ERR7
 BIT3
                                                                                                             004674RG
         - · 000010
                                 BYTE44= 000054
                                                                                                  ERR8
                                                                                                             004670RG.
004664RG
         --000020
                                                                                                                                   F.SEQN= 000100
                                 BYTE45= 000055
BYTE46= 000056
                                                                  BYTE97= 000141
                                                                                                  ERR9
                                                                                                                                   F.SPDV= 000072
F.SPUN= 000074
 BIT5
         = .000040
                                                                  BYTE98 = . 000142
                                                                                                  ERWORD -
                                                                                                             000030RG
         = -000100
 BIT6
                                 BYTE47 = . 000057
                                                                  BYTE99= 000143
                                                                                                             002370R
000242RG
 BIT7
         --000200
                                                                                                                                   F.STBK = 000036
                                 BYTE48= 000060
BYTE49= 000061
                                                                  BYTVAL = . 000144
                                                                                                  FAHIGH:
                                                                                                                                   F.UNIT= 000136
BIT8
                                                                  CBKALL = 001000
                                                                                                                                   F.URBD=-000020
F.VBN-=-000064
                                                                                                  FALOW-
                                                                                                             000244RG
        = -001000
BIT9
                                 BYTE5 = 000005
                                                                                                  FD.CCL= ********* GX.
FD.REC= ********* GX.
                                                                  CBKCLK= 000400
BLHIGH: 000256PG:
                                 BYTE50= 000062
                                                                  CDHIGH.
                                                                            000232RG
                                                                                                                                   F.VBSZ=
GCMBLK
GCMBUF
                                 BYTE51= 000063
BYTE52= 000064
 BLLOW.
           000260RG
                                                                                                                                             000060
                                                                  CDLOW-
                                                                            000234RG
                                                                                                  FD:TTY= : жижжжжж GX:
BPTISR-
                                                                             002450RG
                                                                                                             004010RG
                                                                                                  FIND.
BREAK = 004000 G
                                 BYTE53= 000065
                                                                                                                                             000040RG
                                                                  CMILUN= . 000002.
                                                                                                  FNIN1
BUFCX2
                                                                                                             003732R
                                                                                                                                   GCMLEN.
           002750R
                                                                                                                                             000162RG
                                 BYTE54= 000066
                                                                  CNOBRE = 100000
COMXX 002334
                                                                                                  FNMTCH: 003766R:
BUFSET.
           002612RG
                                                                                                                                   GCMPNT.
                                                                                                                                             000164RG
                                 BYTE55= 000067
BYTE56= 000070
                                                                            002334RG
                                                                                                  FHOUT1
                                                                                                             003724R
                                                                                                                                   GCONLY 003254
GE.BIF= 177775
GE.CLO= 000004
BUFSM-
BUFS2-
           002630RG
                                                                                                                                             003254RG
                                                                  CONSOL 004436RG
                                                                                                  FNOUT2: 003744F
FNUM: =:000006
FSECX: 004120F
                                                                                                             003744R
           002574RG
                                 BYTE57= 000071
                                                                  CP.
                                                                         = · ******* GX.
BUES3
           002556RG
                                 BYTE58=-000072
BYTE59=-000073
BYTE6 =-000006
                                                                  CPCCEN= 010000
                                                                                                           004120R
                                                                                                                                  GE:COM= 000001
GE:CON= 000020
GE:EOF= 177766
BUFS4
           002540RG
                                                                  CPREAD = 040000
                                                                                                  FTBL
                                                                                                             000516R
BUFXX2
           002762R
                                                                  CPWRTE=-020000
                                                                                                  F.ACTL= 000076
BYTE0 = 000000
BYTE1 = 000001
                                 BYTE60= 000074
                                                                 CSADRD= 000004
CSEQCI= 100000
                                                                                                                                  GE:EUF=-177766
GE:IND=-000002
GE:IOR=-177777
GE:LC-=-000010
GE:MDE=-177774
GE:OPR=-177776
                                                                                                  F.ALOC= 000040
F.BBFS= 000062
                                 BYTE61= 000075
BYTE10= 0000012
                                 BYTE62= 000076
                                                                  CSHIGH: 000226RG:
                                                                                                  F.BDB - 000070
BYTE11=-000013
BYTE12=-000014
BYTE13=-000015
                                 BYTE63=:000077
                                                                 CSLOW-
                                                                            000230RG
                                                                                                  F.BGBC= 000057
F.BKDN= 000026
                                 BYTE64= 000100
                                                                 CSOE· = 0000040
                                 BYTE65= 000101
                                                                 CSR1
                                                                                                  F:BKDS=-000020
F:BKEF=-000050
                                                                            002410RG
BYTE14= 000016
                                                                                                                                   GE.RBG= 177730
                                 BYTE66=-000102
BYTE67=-000103
                                                                  CSWRTE= 000100
                                                                                                                                  GE.SIZ= 000040
G.CMLD= 000146
BYTE15= 000017
                                                                 DATA:
                                                                            000206RG
                                                                                                  F.BKP1= 000051
BYTE16= 000020
BYTE17= 000021
                                 BYTE68= 000104
                                                                 DATA2 -
                                                                            000210RG
                                                                                                  F.BKST= 000024
                                                                                                                                   G.DPRM= 000160 G
                                BYTE69= 000105
BYTE7 = 000007
BYTE70= 000106
                                                                 DATA3
                                                                                                  F.BKVB= 000064
F.CHR = 000075
                                                                            000212RG - 000214RG -
BYTE18= 000022
                                                                                                                                   G.ERR -- 000140
                                                                 DATA4
                                                                                                                                   G.ISIZ- 000020
BYTE19= 000023
                                                                 DBR.RD= 000001
DB$CPP= 001457
                                                                                                  F.CNTG=-000034
BYTE2 - - 000002
                                                                                                                                  C. PDL BOOKS
                                BYTE71= 000107
                                                                                                  F. DFNB = 000045 - 31 W.
BYTE20= 000024
                                BYTE72= 000110
                                                                 DB$SPT= 000026
                                                                                                  F.DSPT= 000044
F.DVNM= 000134
                                                                                                                                  G.RSDS= 000142
G.SIZE= 000224
BYTE21= 000025
                                BYTE73= 000111
                                                                 DB$TPC= 000023
                                             Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
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QMAIN. 0-M1110 27-MAR-80 15:17 PAGE-24-2-Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 Q\$LBP · = · 000001 HANG 003426RG · OLDVEC 000006RG S\$S1 = 000010 S\$S2 = 000014 T\$RSET= · 040000 ONCE - = Q\$LDCD= 000003 003512RG HANG2 000100 G T\$SC = 000022 T\$SCLK=:020000 Q\$LDMD=.000004 Q\$LDPP=.002000 Q\$LHP.=.010000 = · 002000 S.BFHD= 000020 HLHIGH. S.FATT= 000016 S.FDB = 000140 $\mathsf{HLLOW} \cdot$ 000254RG OUT1 004644RG T\$SEG1 = . 000000 T\$SEG2= 0000001 T\$SEG3= 000002 HL DOP 004232R 004126RG PACK Q\$MNC - = 140000 INCVAL 000200RG PACKX: 004344R S.FNAM= 000006 IO:ATA≔·******* G PAR\$\$\$= 000027 S.FNB -- 000036 T\$SO = 000001 T\$UBUS= 100000 T\$1CLK= 000400 IO.DET=->кококок G PCLCX-004316R S.FNBW= 000017 IO.RVB= ******* G S.FNTY= 000004 S.FTYP= 000002 S.NFEN= 000020 TD\$CTR= 176370 002764RG PDATA: IO.WVB= ******* G 003150R PDCCX-T\$8BEN= 000020 003564RG KILL PDCX 003142R UBD: IN= 000020 UNPK 004346 LHHIGH: 000246RG PDDX 003154R 004346RG TD\$CTK-: 176360 TD\$CTW=: 176360 TD\$INL=: 004000 TD\$MEM=: 000270 TD\$OAR=: 176344 LHLOW. 999259KC PDVX 003134R UPL IM-000204RG LOADER: 000010R PLB. - 999919 WORD0 = 000000 LOC.EN= 000100 PLC = - 000020 WORD1 = 000002 LOC:WA= 040000 Q\$PP2·=·000300 WORD10=-000024 WORD11=-000026 WORD12=-000030 PLD 000030 LOC.WB= 100000 LOOP = 000004 G LOOPR 003404RG PLRWR - = - 000200 Q\$QHLT= 000013 TD\$OTR=-176346 PLR:EN=-000200 PPCR- =-******** GX-PPS- =-******* GX-Q\$QL = 000043 Q\$QLA = 000053 TD\$QRD=.000274 TD\$SW.=.176376 TD\$TAR=.176372 WORD13=-000032 LOOPX 003510R LUN:TT= 000001 G MAREN1= 000001 Q\$QLB·=·000054 WORD14= 000034 WORD15= 000036 Q\$QLR·=·000001 Q\$QW·=·000042 PRDATA 003156RG TD\$TAW= 176362 WORD16= 000040 WORD17= 000042 WORD18= 000044 PRDX-003252R · TD\$TDR= 176374 000550RG MAREN2 = . 004000 Q\$RDCD= 000005 PRINT. TD\$TDW= 176364 PSECX: 004310F MARLOD= 010000 MAROUT= 000002 004310R Q\$RDMD=-000006 TIME . 004624RG WORD10--000044 WORD19=-000046 WORD2-=-000004 Q\$REBK=-001000 TRTBL -000276RG MAR.LO= 002000 QR\$CR2=:176422 Q\$RHC . = . 006000 Q\$RSC . = . 004000 TRTBL2 000475RG MAR:0U= 000040 QR\$LBR=.176424 WORD20= 0000050 WORD21= 000052 WORD22= 000054 TSKTCB: 000004RG MBKALL = . 001000 MBKCLK = . 000400 QXHIGH 000236RG Q\$RSET= 000010 T\$AD - - 000020 T\$BA - = 000002 T\$BD - 000010 QXLOW- 0002400 Q\$ATTN=-000100 000240RG Q\$SM· = 100000 Q\$SP· = 000120 MDH I GH · 000222RG WORD23-000056 T\$BSO·=·100000 T\$BT·=·000020 Q\$SP2·=·000340 RESEL· 002272R MDLOW. 000224RG Q\$BCL·=·000001 WORD24=-000060 WORD25=-000062 Q\$CCCP=.000040 Q\$CHB.=.000400 MEND: 000176RG T\$BTAR = .000020 T\$BTAR = .000030 T\$BTD - = .002000 T\$CD - = .000100 T\$CLK = .002000 WORD25= 000064 WORD26= 000066 WORD27= 000066 WORD28= 000070 WORD29= 000072 WORD3= 000006 RGQ.EN= 000200 MMADRD = . 000100 RGQ.VA=-000200 RGQ.VA=-020000 RP =-001000 G-Q\$CHRL= 000200 MMHIGH: 000216RG RP = 001000 G RSPCNT 000202RG Q\$CLR·=·000040 Q\$CNC·=·030000 Q\$CP =·000060 MMLEFT= 000002 MMLOW. 000220RG MMOE - - 000004 RTHPT T\$DISK= 000200 T\$DRD = 000004 000170RG MMWRTE=-000010 Q\$CPCC=-000010 SCAN. 003716RG WORD30= 000074 WORD31= 000076 WORD32= 000100 MHOBRE = 100000 MREN1 = 000001 Q\$CP2 -- 000260 Q\$CSC -- 010000 000272RG SDHIGH T\$EMEM= · 010000 T\$FSAA= 000000 T\$FSAB= 000004 T\$FSAC= 000014 SDLOW. 000274RG SEQ.CI= 000274F SEQ.CI= 000010 SET 002644F MREN2 - - 020000 Q\$CSEL = . 000360 WORD33= 000102 Q\$CSET=.0000002 Q\$CSP.=.020000 WORD34= 000104 = · ******* GX SPCR-T\$FSB2=-000010 WORD35= 000106 T\$IB = 000026 T\$IBAR = 000024 T\$IBE = 020000 T\$IBF = 040000 Q\$DMA · = · 000001 WORD36= 000110 WORD37= 000112 WORD38= 000114 SPS. SQHIGH 000262RG MSYN - - 000040 Q\$ENBK = . 040000 MYSELF 000000RG Q\$ENOP= 020000 SQLOW-000264RG Q\$FAL = 004000 Q\$FC = 000045 = 000144 SRHIGH-000266RG WORD39= 000116 NEQLB - - 010000 G 000270RG WORD4 = 000010 -WORD40 = 000120; SRLOW-T\$ICD - = - 000040 H:DID·≈·000024 Q\$F0 - 000044 START. 002174R T\$MODE = 004000 T\$0B = 000036 T\$0BE = 004000 H.DVHM= 000032 H.FID = 000000 Q\$FP· = 000046 WORD41 - 600122 WORD42 - 000124 WORD43 - 000126 WORD44 - 000130 STAT-000024RG Q\$HBF·= 000002 Q\$ICP·= 000006 STOP 004640RG H.FNAM= 000006 S\$CLR - = -T\$0BF·=·010000 ававая N.FTYP= 000014 Q\$IHB -- 000003 = 0000001 S\$LA-T\$DBRA= · 000034 Q\$IHRL= 000002 Q\$IMRP= 000007 N.FVER= 000016 = 0000005 T\$0BWA= 000032 S\$QB WORD45= : 000132 N. NEXT= · 000022 S\$OR - 000006 T\$0UTA= 100000 WORD46= : 000134 N.STAT= 000020 Q\$LBD - = -001000 = 0000004 WORD47= 000136 S # D XT\$RBD0=.000200 N.UHIT= 000034 Q\$LBDP=-001001 01001 S\$SR = 000007 T\$RNB = 000040 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020<u>00</u>1-3 WORD48= 000140

```
QMAIN.
         MACRO-M:110 27-MAR-80 15:17 PAGE-24-3
SYMBOL TABLE
                                            Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
WORD49= 000142
WORD5 = 000012
                                WORD62=-000174
                                                                 WORD76= 000230
                                                                                                  WORD9 = 0000022
                                                                                                                                   $CEFI:=:******* GX:
$DIV =:****** GX:
                                WORD63=-000176
                                                                 WORD77=.000232
                                                                                                  WORD90= 000264
WORD91= 000266
WORD92= 000270
WORD50= 000144
WORD51= 000146
                                WORD64= 000200
                                                                 WORD78= 000234
                                                                                                                                   $DRDSE= жжжжжж GX→
$MUL = жжжжжж GX→
                                 WORD65=-000202
                                                                 WORD79=-000236
WORD52= 000150
                                WORD66= 000204
WORD67= 000206
                                                                 WORD8 - 000020
                                                                                                  WORD93= 000272
WORD94= 000274
                                                                                                                                   $TKTCB= ***** GX
WORD53= 000152
                                                                 WORD80=-000240
WORD81=-000242
WORD82=-000244
                                                                                                                                          = 002046R
                                                                                                                                   $$$
WORD54= 000154
WORD55= 000156
                                 WORD68 = 000210
                                                                                                  WORD95= 000276
                                WORD69=-000212
WORD7 =-000016
                                                                                                                                   $$$ARG= 000002
                                                                                                  WORD96= 000300
WORD97= 000302
                                                                                                                                   $$$T1 = 000067
$$$T2 = 000027
WORD56= 000160
                                                                 WORD83= 000246
WORD57≕.000162
WORD58≕.000164
                                WORD70= 000214
                                                                 WORD84= 000250
WORD85= 000252
                                                                                                  WORD98= 000304
                                                                                                                                   .FSRCB= ******* G
                                WORD71= 000216
                                                                                                  WORD99= 000306
                                                                                                                                   .GCML1= ******** G
.PC1= 001666R
.PC2= 002070R*
.PC3= 001666R
WORD59= 000166
                                WORD72=-000220
WORD73=-000222
                                                                 WORD86 = . 000254
                                                                                                  WRDVAL = . 000310
WORD6 = 000014
                                                                 WORD87= 000256
                                                                                                  WWORDS 000206R
XTREAD = 001000
WORD60= 000170
                                WORD74= 000224
                                                                 WORD88=-000260
WORD61= 000172
                                WORD75= 000226
                                                                                                  XTWRTE = . 000400
                                                                 WORD89= 000262
                                                                                                                                   ...TPC=-000020
          000000
. ABS.
                          ดดด
           005116
                          001
$$FSR1
          001020
                         002
ERRORS DETECTED:
                       0
```

VIRTUAL MEMORY USED: 7917 WORDS (31 PAGES)
DYNAMIC MEMORY: 9140 WORDS (35 PAGES)
ELAPSED TIME: 00:01:36
wMAIN,QMAIN/-SP=E20,1)IM,E20,1)QMAIN

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CPSUB- MACRO M:110 27-MAR-80 14:45 PAGE_5
                                            Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                 .∓ITLE-GRSUB
.PSECT-CPSUB
       2 · 000000
3
                                                                 GP SUBROUTINES.
       8
                                                                 CONTROL STORE SEQUENCING (CONTROL PROCESSOR)
JUMP TO START ADDRESS (VIA BRANCH REGISTER)
      10
                                                                 INPUT:
                                                                 2(SP)
                                                                            START-ADDRESS-
       15
                                                                 OUTPUT:
      16
17
                                                                 OP SEQUENCER SET TO START ADDRESS
          000000
                                                      CPSUB:
       19
          000000
                                                      SEQCS::
      29
      21
                                                                 STOP - GP - AND - MRP - CLOCKS
      22
          000000
                     005046
                                                                 GLR -
                                                                            -(SP)
                                                                                                             : CLEAR - NOTH ING -
          000002:
000006
      24
                     012746
                                                                            #Q$NCLK,-(SP)
                                                                                                             :SET-NO-CLOCKS
      25
                                                                            CSR1
                                                                 CALL
      26
      27
                                                                 GO TO:LOAD:MODE:(AND:CLEAR:EVERYTHING:ELSE)
      28
      29
30
          000012- 005067
                               176422
                                                                            QR$CR2∙
                                                                                                             :DO-IT
      Зi
                                                                 SELECT BRANCH REGISTER IN CP
      32
33
          000016
000020
                     005046
                                                                 CLR.
                                                                            -(SP)
                                                                                                             :DEFINE BR REG SELECT
                                                                            CPCRA-
                                                                                                             :WRITE · CR · (WITHOUT · AUTOMATIC · BR · INHIBIT)
      36
37
                                                                 GLOCK-GP-ONCE-
      38
          000024
                     012746
                                язавав
                                                                                                             :CLEAR · CP · NO · CLOCKS · :SET · CP · SINGLE · CLOCK
                                                                            #Q$CNC,-(SP)
          000030
                     012746
                                020000
                                                                 MOV.
                                                                            #Q$CSP,-(SP)
      40
          000034
                                                                 CALL
                                                                            CSR 1
      41
      42
                                                                 MOVE · INSTRUCTION · AND · ADDRESS · TO · BRANCH · REGISTER · VIA · LOAD · BUS · ISSUE · CLOCK · TO · PUT · START · ADDRESS · CONTENTS · AT · INPUTS · TO · PLR ·
      43
      44
      45
          000040
                                                                            #BIT13,2(SP)
2(SP),-(SP)
LBCP
                     052766
                                020000
                                           000002
                                                                                                            :OR JMP INSRUCTION (02) INTO HIGH ORDER NIBBLE:
:COPY ARGUMENT INTO STACK FOR LECP CALL
:DO MOVE - ISSUE CLOCK:
      46
          000046
                     016646
                                000002
                                                                 MOV.
      47
48
          000052
                                                                 CALL
      49 000056
50 000062
                     011666
005726
                                                                            (SP),2(SP)
                                000002
                                                                 MOV.
                                                                                                            ;MOVE-RETURN-ADDRESS DOWN-STACK-
;POINT-TO-RETURN-ADDRESS-
      50 000062
51 000064
                                                                 TST:
RETURN
                                                                            (SP) +
```

```
CPSUB- - M
               0 M1110 27-MAR-80 14:45 PAGE 6
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
      53
54
55
                                                              CONTROL:STORE:SEQUENCING:(CONTROL:PROCESSOR)
SET:START:ADDRESS:FOR:WRITE:
      56
57
58
59
                                                              INPUT:
                                                                        START ADDRESS
                                                              2(SP)
      60
61
62
63
                                                              OUTPUT-
                                                              CP SEQUENCER SET. TO START ADDRESS.
         000066
                                                    WRTCS::
      64
      65
66
67
68
                                                              STOP GP AND MRP CLOCKS
         000066
000070
                    005046
                                                              CLR
                                                                        -(SP)
                                                                                                        :CLEAR · NOTHING
                    012746
                              176000
                                                                        #Q$NCLK,-(SP)
                                                                                                       ;SET-NO-CLOCKS
      69
70
71
72
73
74
          000074
                                                              CALL
                                                              GO TO.LOAD.MODE.(AND.CLEAR.EVERYTHING.ELSE)
          000100
                    005067
                              176422
                                                              CLR
                                                                        QR$GR2
                                                                                                       :DO:IT
      75
76
77
                                                              SELECT-BRANCH-REGISTER IN-CP-
          000104
                    005046
                                                              CLR -
                                                                        -(SP)
                                                                                                       :DEFINE BR REG SELECT
      78
79
         000106
                                                              CALL.
                                                                        CPCRA-
                                                                                                       :WRITE-CR-(WITHOUT-AUTOMATIC-BR-INHIBIT)
                                                              GLOCK - GP - ONCE
      81
     82-000112-
83-000116
84-000122-
                    012746
                              030000
                                                              MOV.
                                                                        #Q$CNC,-(SP)
                                                                                                       :CLEAR · CP · NO · CLOCKS
                    012746
                              020000
                                                              MOM-
                                                                        #Q$CSP,-(SP)
                                                                                                       ;SET-CP-SINGLE-CLOCK
                                                              CALL
                                                                        CSR4
      85
     86
87
                                                             MOVE: INSTRUCTION: AND: ADDRESS: TO: BRANCH: REGISTER: VIA: LOAD: BUS:
      88
         000126
                    052766
                              020000
                                         000002.
                                                              BIS.
                                                                        #BIT13,2(SP)
                                                                                                       ;OR.JMP.INSRUCTION.(02) INTO HIGH ORDER NIBBLE;
;COPY.ARGUMENT.INTO STACK FOR LBCP.CALL;
;DO MOVE - FIRST CLOCK
     89
90
91
         000134
                    016646
                              000002
                                                                       2(SP),-(SP)
LBCP
                                                              MOV.
         000140
                                                              CALL -
      92.000144
                                                              RETURN.
```

```
CPSUB MACRO M: 110 27-MAR-80 14: 45 PAGE 7 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      95
96
97
                                                                  DATA · TRANSFER ·
                                                                  LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-CP-BUS
       98
                                                                  INPUT:
      99
                                                                  2(SP)
                                                                             DATA FOR PRE-SELECTED CP DESTINATION
      100
      101
          000146
                                                       LBCP::
                                                                             2(SP),QR$LBR
#<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
      102
          000146
                                 000002
                                            176424
                                                                  MOV-
                                                                                                              #MOVE DATA TO LOD BUS REG
#CLR DRIVE AND PULSE
#CLR SELECTION BITS
                     012746
052716
012746
      103
          000154
                                 001001
                                                                  MOV
      104 000160
                                 000360
                                                                  BIS
           000164
                                 176000
                                                                  MOV.
BIS.
                                                                                                              ;SET.NO-CLOCKS
;SELECT.CP
      106
107
           000170
                      052716
                                 000260
                                                                             #Q$CP2,(SP)
           000174
                                                                  CALL
                                                                             CSR1
      108
      109
           000200
                      012746
                                 030000
                                                                  MOV.
                                                                             #Q$CNC,-(SP)
                                                                                                              #CLEAR.CP.NO-CLOCK.BITS #SET.CP.CLOCK.
      110
          000204
                      012746
                                 021000
                                                                  MOV.
                                                                             #<Q$CSP+Q$LBD>,-(SP)
      111
112
          000210
                                                                  CALL
                                                                             CSR 1
                                                                                                                                                 -magnific
      113
                                                                  DE-SELECTION
      114
                     012746
052716
012746
      115 000214
116 000220
                                 001001
                                                                  MOV-
                                                                             #<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                                                                              :CLEAR · DRIVE · AND · PULSE
                                 000360
                                                                  BIS
                                                                                                              ;CLR · SELECTION · BITS
           000224
                                 176000
                                                                  MOV-
                                                                                                              :SET-NO-CLOCKS
      118
           000230
                                                                  CALL
                                                                             CSR<sub>4</sub>
      119
      120 000234
                      011666
                                 000002
                                                                  MOV:
                                                                             (SP),2(SP)
                                                                                                              :MOVE-RETURN-ADDRESS DOWN-STACK-
:POINT-TO-RETURN-ADDRESS-
           000240
                      005726
                                                                  TST.
RETURN
                                                                             (SP)+
      122-000242-
```

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O M1110 27-MAR-80 14:45 PAGE 8
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
CPSUB- . . M
    125
126
127
                                                         DATA · TRANSFER
                                                         LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-CP-BUS
                                                         SINGLE CLOCK SEQUENCER ONLY.
    128
    129
    130
                                                                  DATA FOR PRE-SELECTED CP DESTINATION
                                                         2(3P)
    131
         000244
                                               LBCSC::
     133
         000244
                   016667
                            0000021 176424
                                                        MOV-
                                                                                              :MOVE DATA TO LOD BUS REG
                                                                  2(SP),QR$LBR
    134
         000252
                  012746
052716
012746
                            001001
                                                         MOV.
                                                                  #<Q$LBD+Q$LBP>,-(SP)
                                                                                              CLR DRIVE AND PULSE
CLR SELECTION BITS
     135
         000256
                                                                  #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
#Q$CP2,(SP)
                            000360
                                                         BIS-
         000262
                            176000
                                                        MOV
                                                                                              ;SET-NO-CLOCKS
    137
138
         000266
                  052716
                            000260
                                                         BIS
                                                                                              ; SELECT: CP
         000272
     139
     140
         000276
                  012746
                            030000
                                                        MOV-
                                                                  #Q$CNC,~(SP)
#XQ$CSC+Q$LBD>,~(SP)
                                                                                              :CLEAR · CP · NO+CLOCK · BITS ·
        000302
000306
     141
                  012746
                            011000
                                                        MOV.
                                                                                              :SET-CP-CLOCK-
     142
                                                         CALL
                                                                  CSR1
     143
    144
                                                        DE-SELECTION
    145
     146
         000312
                  012746
                            001001
                                                                                              :CLR.DRIVE AND.PULSE
                                                        MOV
                                                                  #<Q$LBD+Q$LBP>.-(SP)
     147
         000316
                  052716
                            000360
                                                                  #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                        BIS.
                                                                                              CLR SELECTION BITS
         000322.
    148
                  012746
                            176000
                                                        MOV.
                                                                                              :SET-NO-CLOCKS
         000326
                                                        CALL
    150
    151 000332
                  011666
                            000002
                                                        MOV.
                                                                                              :MOVE RETURN ADDRESS DOWN STACK
                                                                  (SP),2(SP)
    152 - 000336
                  005726
                                                         TST-
                                                                  (SP) +
                                                                                              *POINT TO RETURN ADDRESS
    153 000340
                                                        RETURN.
```

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CPSUB MACRO M1110 27+MAR-80 14:45 PAGE 9 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     156
157
158
                                                              DATA TRANSFER TO LOD BUS REG FROM CP
                                                              OUTPUT:
     159
                                                              (SP)
                                                                        DATA FROM PRE-SELECTED CP SOURCE
     160
161 000342
                                                    ĆPLB:∶
     162.000342.
                    012746
                               001001
                                                              MOV
                                                                        #<Q$LBD+Q$LBP>,-(SP)
                                                                                                       :CLR DRIVE AND PULSE
                    052716
012746
052716
     163 000346
                               000360
                                                              BIS.
                                                                        #<Q$CSEL>.(SP)
#<Q$NCLK>.-(SP)
                                                                                                       CLR SELECTION BITS
SET NO-CLOCKS
SOURCE IS CP
     164 000352
165 000356
                               176000
                               000260
                                                              BIS.
                                                                         #Q$CP2,(SP)
     166
          000362
                                                                        CSR1
(SP),-(SP)
QR$LBR,2(SP)
                                                              CALL
     167
          000366
                     011646
                                                              MOV.
                                                                                                       :MOVE-RETURN-ADDR-UP STACK-
:MOVE-DATA ONTO-STACK-
     168 000370
                    016766
                               176424
                                         000002
     169
     170
          000376
                    012746
                               000260
                                                              MOV-
                                                                        #Q$CP2,-(SP)
-(SP)
                                                                                                       ;CLEAR · CP · SELECT
     171 000402·
172·000404
                    005046
                                                              CLR.
                                                                                                       :SET-NOTHING.
                                                              CALL
                                                                        CSR4
     173 000410
                                                              RETURN.
```

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CPSUB- .. M
               0 · M1110
                          27-MAR-80 14:45 PAGE 10
                                          Approved For Release 2005/07/12 LIA-RDP85-00514R000200020001-3
     175
     176
177
                                                              CP CONTROL REGISTER LOADING
     178
179
     180
                                                                        BIT-SETTING-FOR-CP-CONTROL-REGISTER-
                                                              2(SP)
     181
     182.000412
                                                   CPCR::
          000412
000420
     183
                    052766
                               100000
                                         :000002
                                                              BIS.
                                                                        #CNOBREG,2(SP)
                                                                                                       ;AUTOMATIC INHIBIT OF BRANCH REGISTER
     184
                                                   CPCRA::
     185
          000420
                     016667
                               000002
                                         .176424
                                                              MOV-
                                                                        2(SP),QR$LBR
#<Q$LBD+Q$LBP>,-(SP)
#{Q$CSEL>,(SP)
                                                                                                       #CONTROL BITS DESTINED FOR CP
#CLEAR DRIVE AND PULSE 
#CLE SELECTION BITS
                    012746
052716
012746
     186
          000426
                               001001
                                                              MOV.
          000432
     187
                               000360
                                                              BIS
          000436
     188
                               000060
                                                              MOV.
                                                                        #Q$CP,-(SP)
                                                                                                       :SELECT-CP
     189
          000442
                                                              CALL
                                                                        CSR4
     190
     191 000446
                     005046
                                                              CLR.
                                                                        -(SP)
                                                                                                       :CLEAR · NOTHING · :SET · PULSE
          000450
                     012746
                               000001
                                                              MOV.
                                                                        #Q$LBP,-(SP)
     193 000454
                                                              CALL
                                                                        CSR1
     194
     195
          000460
                    012746
                               000061
                                                              MOV.
                                                                                                       :CLEAR · CR · SELECTION · AND · PULSE :SET · NOTHING ·
                                                                        #<Q$CP+Q$LBP>,-(SP)
     196
197
          000464
                                                                        -(SP)
          000466
                                                              CALL
                                                                        CSR1
     198
     199 000472
                    011666
                               000002
                                                              MOV.
                                                                                                       :MOVE-RETURN-ADDRESS DOWN-STACK & POINT-TO-RETERN-ADDRESS
                                                                        (SP),2(SP)
     200 000476
201 000500
202
                    005726
                                                              TST-
                                                                        (SP) +
                                                              RETURN.
     203
                    000001
                                                              .END
```

```
CPSUB---MACRO-M1110 27-MAR-80014:45 PAGE-10-1
SYMBOL TABLE
                                                 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                                       BYTE94= 000136
ALUCKE = . 040000
                                   BYTE42= .000052 .
                                                                                                           PLR.EN≃.000200
                                                                                                                                               Q$RNC · = · 006000
ALUŌE - 004000
A01 = 010000
                                    BYTE43= 000053
                                                                       BYTE95= 000137
                                                                                                           QR$CR1= 176420
                                                                                                                                               Q$RSC - - 004000
Q$RSET - 000010
                                                                       BYTE96=.000140
BYTE97=.000141
BYTE98=.000142
                                   BYTE44=-000054
BYTE45=-000055
                                                                                                           QR$CR2= 176422
BITYAL = 000000
BIT0 = 000001
BIT1 = 000002
                                                                                                                                               Q$SM = 100000
Q$SP = 000120
                                                                                                           QR$LBR= · 176424
                                    BYTE46 = . 000056
                                                                                                           Q$ATTN= 000100
Q$BCL - 000001
Q$CCCP= 000040
                                                                                                                                               Q$SP
                                                                       BYTE99= 000143
                                    BYTE47= 000057
                                                                                                                                               Q$SP2 - 000340
                                   BYTE48= 000060
BYTE49= 000061
BYTE5 = 000005
                                                                                                                                               RGO,EN=.000340
RGO.VA=.020000
SEOCS-.0000000
SEO.CI=.000010
BIT10 = 002000
BIT11 = 004000
                                                                       BYTVAL = . 000144
                                                                                                           Q$CHB·=·000400
Q$CHRL=·000200
Q$CLR·=·000040
                                                                       CBKALL = 001000
CBKCLK = 000400
BIT12 -- 010000
BIT13 -- 020000
BIT14 -- 040000
                                                                                                                                                           000000RG
                                                                                                                                                                             002
                                    BYTE50 = 000062
BYTE51 = 000063
                                                                       CHOBRE = 100000
                                                                       CPCCEN= 010000
CPCR 000412RG
                                                                                                     Q$CNC -- 030000
002 Q$CP -- 000060
                                                                                                                                               S$CLR·= 000000
S$LA = 000001
BIT15 = 100000
BIT2 - = 000004
                                    BYTE52= 0000064
                                                                                                     002 Q$CPCC= 000010
                                    BYTE53= 000065
                                                                        CPCRA.
                                                                                   000420RG
                                                                                                                                                       = 0000005
                                                                                                                                               S$QB
        = 0000010
                                                                                                     002 · Q$CP2 · = · 000260
Q$CSC · = · 010000
002 · Q$CSEL = · 000360
BIT3
                                    BYTE54= 000066
                                                                       CPLB.
                                                                                   000342RG
                                                                                                                                               SSOR
         = .000020
                                    BYTE55= 000067
BIT4
                                                                        CPREAD = . 040000
                                                                                                                                                       = · 000004
= · 000007
                                                                                                                                               S$0X
        = · 000040
= · 000100
BIT5
                                    BYTE56= 000070
                                                                                   000000R
                                                                        CPSUB.
                                                                                                                                               S$SR
                                    BYTE57= 000071
                                                                       CPWRTE = . 020000
CSADRD = . 000004
                                                                                                           Q$CSET= 000002
Q$CSP = 020000
Q$DMA = 000001
                                                                                                                                                       = 0000010
= 000014
BIT6
                                                                                                                                               S$S1
         = 000200
                                    BYTE58= 000072
BIT7
                                                                                                                                               S$S2
                                                                                                                                               TD$CTR= 176370 TD$CTW= 176380 TD$INL= 000270
BIT8.
         = 000400
                                    BYTE59= .000073
                                                                        CSEQCI = 100000
                                                                       CSOE = 000040
CSR1 = ****** GX
BIT9 = 001000
BYTE0 = 000000
                                   BYTE6 = 000006
BYTE60= 000074
                                                                                                           Q$ENBK = . 040000
                                                                                                           Q$ENOP=.020000
                                                                                                           Q$FAL = 004000
Q$FC = 000045
Q$FO = 000044
Q$FP = 000046
BYTE1 = 000001
                                    BYTE61= 000075
                                                                       CSWRTE = . 000100
                                    BYTE62= 000076
                                                                        DBR.RD= 000001
BYTE10=-000012
                                                                                                                                               TD$0AR= 176344
BYTE11= 000013
                                    BYTE63= 000077
                                                                        DB$CPP=:001457
                                                                                                                                               TD$0TR=+176346
BYTE12= 000014
BYTE13= 000015
                                                                                                                                               TD$0RD= 000274
TD$SW = 176376
                                    BYTE64= 000100
                                                                        DB$SPT= 000026
                                    BYTE65= 000101
BYTE66= 000102
                                                                       DB$TPC=-000023
                                                                                                           Q$HBF - = - 000002
BYTE14= 000016
                                                                                                           Q$ICP·=·000006
Q$IHB·=·000003
Q$IHRL=·000002
                                                                       DISPGS=: 100000
                                                                                                                                                TD$TAR= 176372
BYTE15= 000017
                                    BYTE67 = . 000103
                                                                        DMAAWR = . 000005
                                                                                                                                               TD$TAW= · 176362
BYTE16=-000020
                                    BYTE68= 000104
                                                                        DMARRD= . 000003
                                                                                                                                               TD$TDR=:176374
BYTE17= 000021
                                    BYTE69= 000105
BYTE7 = 000007
                                                                       DMARWR= - 0000004
                                                                                                           Q$IMRP=-000007
                                                                                                                                               TD$TDW= 176364
BYTE18= 000022
                                                                                                     Q$LBD - = 001000
002 · Q$LBDP = 001001
002 · Q$LBP - = 000001
                                                                                                                                               T$AD = 000020
T$BA = 000002
                                                                       ENBR: =:010000
BYTE19= 000023
                                    BYTE70= 000106
                                                                        LBCP -
                                                                                   000146RG
BYTE2 - - 000002
BYTE20 - 000024
                                    BYTE71= 000107
                                                                        LBCSC -
                                                                                   000244RG
                                                                                                                                               T#RD
                                                                                                                                                      = 000010
                                    BYTE72= 000110
BYTE73= 000111
                                                                        LOC.EN= 000100
                                                                                                           Q$LDCD= 000003
                                                                                                                                               T$850·=·100000
BYTE21 = . 000025
                                                                       LOC.WA= 040000
LOC.WB= 100000
                                                                                                           Q$LDMD= 000004
Q$LDPP= 002000
                                                                                                                                                T$BT = 000020
BYTE22= 0000026
                                    BYTE74= 000112
                                                                                                                                               T$BTAR= 000030
                                                                                                                                               T$BTD = 000000
T$CD = 000000
T$CLK = 000000
BYTE23= 0000027
                                    BYTE75=.000113
BYTE76=.000114
BYTE77=.000115
                                                                        MAREN1 = . 000001
                                                                                                           Q$LHP - = - 010000
BYTE24= : 000030
                                                                       MAREN2= 004000
MARLOD= 010000
                                                                                                           Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
BYTE25= 000031
BYTE26=-000032
                                    BYTE78= 000116
                                                                        MAROUT = . 000002
                                                                                                                                               T$DISK=.000200
T$DRD.=.000004
                                    BYTE79=-000117
BYTE8 =-000010
BYTE27=:000033
                                                                        MAR.LO= 002000
                                                                                                            Q$MRP2= 000240
BYTE28= · 000034
                                                                                                           Q$MSC - = 040000
Q$MSET = 000004
Q$MSP - = 100000
                                                                       MAR.OU= 000040
MBKALL= 001000
                                                                                                                                                T$EMEM= 010000
BYTE29= 0000035
                                    BYTE80= 000120
                                                                                                                                               T$FSAA= 000000
T$FSAB= 000004
T$FSAC= 000014
BYTE3 = 0000003
                                    BYTE01= 000121
                                                                        MBKCLK= 000400
BYTE30= 000036
                                    BYTE82= 000122
BYTE83= 000123
                                                                        MMADRD= 000100
                                                                                                            Q$NCLK= · 176000
BYTE31 = . 000037
                                                                                                                                               T$F$B2= 000010.#
T$IB = 000026
                                                                       MMLEFT= 000002
MMOE = 000004
                                                                                                           Q$PP - - 000100
Q$PPSW- 000320
 BYTE32= 000040
                                    BYTE84= · 000124
                                                                        MMWRTE= 000010
                                                                                                                                               T$IBAR= 000024
BYTE33= · 000041
                                    BYTE85=-000125
                                                                                                           Q$PP2 -- 000300
                                                                                                           Q$QHLT=-000013
Q$QL--000013
Q$QL--000053
Q$QLB--000054
                                                                       MHOBRE = 100000
MREH1 = 000001
MREH2 = 020000
BYTE34= . 000042
                                    BYTE86= 000126
                                                                                                                                                T$IBE - = -020000
BYTE35= 0000043
                                    BYTE87 = . 000127
                                                                                                                                                T$IBF·=·040000
BYTE36= 000044
BYTE37= 000045
                                    BYTE88= 000130
                                                                                                                                                T$ICD - = -000040
                                                                       MSYN = 000040
N = 000144
                                    BYTE89= 000131
                                                                                                                                                T$MODE = . 004000
BYTE38 = 000046
                                    BYTE9 = 000011
                                                                                                            Q$QLR.-.000001
                                                                                                                                                T$0B = 000036
                                                                        PLB
BYTE39= 000047
                                    BYTE90= 000132
                                                                                = 000010
                                                                                                            Q$QW· = 000042
                                                                                                                                               T$08F $004000
                                                                                                                                                                          Salter St. S.
BYTE4 = 000004
BYTE40= 000050
                                    BYTE91= 000133
                                                                                --000020
                                                                                                           Q$RDCD= · 0000072
                                                                        PLC
                                    BYTE92=-000134
                                                                                                 Q$RDMD= 000006
Q$REBK= 001000
FIA-RDP85-00514R000200020001-3
                                                                       PLD = 000030
PLRWR = 000200
                                                                                                                                               T$0BRA= .000034 A
BYTE41 = . 000051
                                   BYTE93=-000135
                                                                                                                                                T$0BWA= 000032
                                                 Approved For Release 2005/07/12
```

```
NO:M1110 27-MAR-80 14:45 PAGE:10-2:
                                            Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
SYMBOL TA
T$0UTA= 100000
                                 MORD 18 = - 000044
                                                                 WORD4 = 000010
                                                                                                  WORD61=-000172
                                                                                                                                   WORD82= 000244
                                WORD19=-000046
WORD2-=-000004
T$RBDO=:000200
                                                                 WORD40= 000120
WCRD41= 000122
                                                                                                  WORD62=-000174
WORD63=-000176
                                                                                                                                   WORD83= 000246
T$RNB - = - 000040
                                                                                                                                   WORD84= 000250
T$RSET= 040000
T$SC - 000022
                                 WORD20 - 000050
                                                                  WORD42=-000124
                                                                                                  WORD64= 000200
                                                                                                                                   WORD85 = . 000252
                                 WORD21= 000052
                                                                 WGRD43=-000126
                                                                                                  WORD65= 000202
                                                                                                                                   WORD86= 000254
T$SCLK=-020000
                                 WORD22= 000054
                                                                 WORD44= 000130
                                                                                                  WORD66= 000204
WORD67= 000206
                                                                                                                                   WORD87=
                                                                                                                                              000256
T$SEG1=-000000
T$SEG2=-000001
                                 WORD23= 000056
                                                                  WCRD45 = · 000132
                                                                                                                                   WORD88=-000260
WORD89=-000262
WORD9 =-000022
                                                                 WORD46= 000134
WORD47= 000136
                                 UORD24= ∙000060
                                                                                                  WORD68=-000210
T$SEG3= 000002
                                 WORD25=-000062
                                                                                                  WORD69= 000212
WORD7 = 000016
T$SO· = 0000001
T$UBUS= 100000
                                 WORD26= 000064
                                                                 WORD48=-000140
                                                                                                                                   WORD90= 000264
                                WORD27=-000066
WORD28=-000070
                                                                  WORD49= 000142
                                                                                                  WORD70= 000214
                                                                                                                                   WORD91=-000266
WORD92=-000270
T$1CLK= 000400
                                                                 WORD5 = 000012
WORD50= 000144
                                                                                                  WORD71--000216
                                WORD29=.000070
WORD29=.0000072
WORD3 =.0000006
T$8BEH= 000020
                                                                                                  WORD72=-000220
WORD73=-000222
                                                                                                                                   WORD93=.000272
UBD.IN= 000020
WORD0 = 000000
WORD1 = 000002
                                                                  WORD51= 000146
                                                                                                                                   WORD94= 000274
WORD95= 000276
                                WORD30= 0000074
WORD31= 000076
                                                                  WORD52= 000150
                                                                                                  WORD74= 000224
                                                                 WORD53=-000152
WORD54=-000154
                                                                                                  WORD75=.000226
                                                                                                                                   WORD96 = '000300
WORD1 = 0000024
WORD11 = 000026
WORD12 = 000030
WORD13 = 000032
                                 WORD32= 000100
                                                                                                  WORD76= 000230
WORD77= 000232
                                                                                                                                   WORD97= 000302
                                 WORD33=-000102
                                                                  WORD55= 000156
                                                                                                                                   WORD98= 000304
                                 WORD34= 000104
                                                                  WORD56= 000160
                                                                                                  WORD78 - . 000234
                                                                                                                                   WORD99-000306
                                 WORD35 = . 000106
                                                                 WORD57--000162
                                                                                                  WORD79= 000236
                                                                                                                                   WRDVAL = . 000310
WORD14= 000034
                                 WORD36 = . 000110
                                                                 WORD58=-000164
WORD59=-000166
                                                                                                  WORD8 - 000020
                                                                                                                                   WRTCS.
                                                                                                                                             000066RG
                                                                                                                                                              002
WORD15=-000036
WORD16=-000040
                                 WORD37= 000112
                                                                                                  WORD80= 000240
WORD81= 000242
                                                                                                                                   XTREAD = . 001000
                                 WORD38= 000114
                                                                  WORD6 - 000014
                                                                                                                                   XTWRTE= 000400
WORD17= 000042
                                 WORD39 - 000116
                                                                 WORD60 - 000170
. ABS:
           000000
                          999
           000000
                          001
CPSUB-
           000502
                          002
ERRORS DETECTED:
                        Ø
```

VIRTUAL MEMORY USED: 3021 WORDS (12 PAGES)
DYNAMIC MEMORY: 3860 WORDS (14 PAGES)
ELAPSED TIME: 00:00:43
CPSUB, EPSUB/+SP=[20,1]IM,[20,1]CPSUB

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```
TO M1110 27-MAR-80 15:12 PAGE 5 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
MRPSUB- M
                                                             . FITLE - MRPSUB- -
                                                             .PSECT · MRPSUB ·
         000000
       234567
                                                            MRP · SUBROUTINES ·
       8
9
10
                                                            GONTROL·STORE·SEQUENCING·(MATCH·REPORT·PROCESSOR)
JUMP·TO·START·ADDRESS·(VIA·BRANCH·REGISTER)
                                                             INPUT:
       12
                                                                      START-ADDRESS-
       13
                                                            OUTPUT:
       15
                                                             MRP - SEQUENCER - SET - TO - START - ADDRESS -
       16
17
                                                   MRPSUB:
          000000
                                                   SEQMM::
          000000
       20
       21
22
23
                                                             STOP - CP - AND - MRP - CLOCKS
                                                                       -(SP)
                                                                                                     :CLEAR - NOTHING -
                                                             CLR:
          000000 005046
       24
25
26
          000002.
                    012746
                               176000
                                                                       #O$NCLK,-(SP)
                                                                                                     :SET-NO-CLOCKS-
          000006
                                                             CALL:
                                                                       CSR4
                                                             GO TO-LOAD-MODE-(AND-CLEAR-EVERYTHING-ELSE)
       27
28
                                                                                                     :DO:IT:
           000012 005067
                                                             CLR:
                                                                       QR$GR2:
       30
31
32
                                                             SELECT BRANCH REGISTER IN MRP
                                                                                                     :DEFINE BR REG SELECT:
:WRITE CR (WITHOUT AUTOMATIC BR SUPPRESS)
                                                                       -(SP)
                                                             CLR -
           000016
                     005046
       34
35
36
37
                                                                       MRPCRA-
                                                             CALL:
           000020
                                                             GLOCK - MRP - ONCE -
                                                                                                     ;CLEAR · MRP NO · CLOCKS
                               140000
                                                             MOV.
                                                                       #0$MNC.-(SP)
       38
           000024
                     012746
                                                                       #Q$MSP,-(SP)
                     012746
                                                                                                     ;SET-MRP-SINGLE-CLOCK-
                               100000
                                                             MOV-
           инияза.
       39
       40
           000034
       41
                                                             MOVE: INSTRUCTION: AND: ADDRESS: TO: BRANCH: REGISTER: VIA: LOAD; BUS:
       42
       43
                                                                                                     :OR JMP INSRUCTION (02) INTO HIGH ORDER NIBBLE:
:COPY ARGUMENT INTO STACK FOR LBMRP CALL
:DO MOVE - FIRST CLOCK
                                                                       #BIT13,2(SP)
                               020000
                                         000002
       44 000040
                     052766
                                                                       2(SP),-(SP)
LBMRP
       45
           000046
                                                             мοуч
                     016646
           000052
                                                              CALL
       47
                                                                                                     :MOVE RETURN ADDRESS DOWN STACK :POINT TO RETURN ADDRESS
                                                              MOV.
                                                                        (SP),2(SP)
                     011666
                               000002
       48 000056
                                                             TST.
RETURN.
           000062
                                                                        (SP) +
        50 000064
```

```
52
53
54
                                                                  CONTROL STORE SEQUENCING (MATCH REPORT PROCESSOR)
SET START ADDRESS FOR WRITE
55
56
57
58
59
61
62
63
                                                                  INPUT:
                                                                              START-ADDRESS-
                                                                  2(SP)
                                                                  OUTPUT -
                                                                  MRP - SEQUENCER - SET - TO - START - ADDRESS
    · 000066
                                                      ÚR™::
64
65
                                                                  STOP - GP - AND - MRP - CLOCKS
66
    000066
                 005046
                                                                  CLR -
                                                                               -(SP)
                                                                                                                   :CLEAR · NOTHING · :SET · NO · CLOCKS ·
67
    000070
                 012746
                             176000
                                                                  MOV.
                                                                               #Q$NCLK,-(SP)
68
69
    000074
70
71
72
73
74
75
76
                                                                  GO TO-LOAD-MODE (AND-CLEAR-EVERYTHING-ELSE)
                 005067
    000100
                             176422
                                                                  CLR
                                                                              QR$GR2
                                                                                                                   :D0.IT
                                                                  SELECT BRANCH REGISTER IN MRP
    000104
                005046
                                                                               -(SP)
                                                                  DIR.
                                                                                                                   ;DEFINE BR REG SELECT
    00010E
                                                                  CALL
                                                                              MRPCRA
                                                                                                                   :WRITE CR (WITHOUT AUTOMATIC BR INHIBIT)
78
79
                                                                  GLOCK-MRP-ONCE
80
                                                                                                                   ;CLEAR MRP NO CLOCKS
;SET MRP SINGLE CLOCK
81
    000112
                 012746
                              140000
                                                                  MOV-
                                                                               #Q$MNC,-(SP)
82
83
    000116
                 012746
                             100000
                                                                  MOV.
                                                                               #Q$MSP,-(SP)
    000122
                                                                  CALL
                                                                              CSR1
84
                                                                  \texttt{MOVE} \cdot \texttt{INSTRUCTION} \cdot \texttt{AND} \cdot \texttt{ADDRESS} \cdot \texttt{TO} \cdot \texttt{BRANCH} \cdot \texttt{REGISTER} \cdot \texttt{VIA} \cdot \texttt{LOAD} \cdot \texttt{BUS}_{2333}^{\text{CONTRACTION}}
85
```

#BIT13,2(SP)

2(SP),-(SP) LBMRP

(SP),2(SP)

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MRPSUB- MACRO-M1110 27-MAR-80 15:12 PAGE-6

86

87

88

89

90 91

000126 000134

000140

000144

92.000150

052766

016646

011666

005726

020000:

000002

000002

000002

BIS.

MOV:

MOV:

CALL

:OR.JMP.INSRUCTION.(02) INTO-HIGH-ORDER-NIBBLE: :COPY-ARGUMENT-INTO-STACK-FOR-LBMRP-CALL : :DO-MOVE-- FIRST-CLOCK-

manifest designation (I) This

:MOVE-RETURN-ADDRESS DOWN-STACK

:POINT TO RETURN ADDRESS

```
MRPSUB-
                0-M1110 27-MAR-80 15:12- PAGE-7
                                             Approved For Release 2005/07/12 IA-RDP85-00514R000200020004-3
      94
95
96
                                                                   \label{eq:data-transfer} \begin{array}{l} \texttt{DATA-TRANSFER-} \\ \texttt{LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-MRP-BUS} \end{array} 
      97
98
99
                                                                  INPUT:
                                                                  2(SP)
                                                                             DATA FOR PRE-SELECTED MRP DESTINATION.
      100
      101
          000152
                                                       LBMRP::
     102-000152-
103-000160
                     016667
                                 000002.
                                            176424
                                                                  MOV:
                                                                             2(SP),QR$LBR
                                                                                                              :MOVE DATA TO LOD BUS REG
:CLR DRIVE AND PULSE
                      012746
                                 001001
                                                                  MOV.
                                                                              #<Q$LBD+Q$LBP>,-(SP)
      104
           000164
                      052716
                                                                  BIS.
MCV
                                 000360
                                                                             #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                                                                               :CLR - SELECTION - BITS -
          000176
000174
                      012746
      105
                                 176000
                                                                                                              ;SET.NO-CLOCKS
;SELECT.MRP.
                      052716
      106
                                 000240
                                                                  BIS.
                                                                              #Q$MRP2,(SP)
      107
           000200
                                                                             CSR1
                                                                  CALL
      108
                     012746
012746
      109
          000204
                                 140000
                                                                  MOV.
                                                                              #0$MNC,-(SP)
                                                                                                              ;CLEAR·MRP NO+CLOCK·BITS·
;SET·MRP·CLOCK·
      110 000210
                                 101000
                                                                  MOV.
                                                                             \#\langle Q$MSP+Q$LBD\rangle, -(SP)
      111 000214
                                                                  CALL
                                                                             CSRi
      113
114
                                                                  DE-SELECTION
      115
          000220
                      012746
                                 001001
                                                                             #<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                                  MOM
                                                                                                               ;CLEAR · DRIVE · AND · PULSE ·
      116 000224
117 000230
                      052716
                                 000360
                                                                  BIS-
                                                                                                              CLR SELECTION BITS
SET NO-CLOCKS
                      012746
                                 176000
                                                                  MOV.
      118
           000234
                                                                  CALL
                                                                             CSR4
      119
      120 000240
                      011666
                                 000002
                                                                             (SP),2(SP)
                                                                  MOV.
                                                                                                               :MOVE-RETURN-ADDRESS DOWN-STACK-
      121 000244
122 000246
                      005726
                                                                  TST.
                                                                              (SP) +
                                                                                                               :POINT TO RETURN ADDRESS
                                                                  RETURN.
```

```
27-MAR-80 15:12 PAGE/8
MRPSUB- MACRO - Mar. 10
                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     124
125
126
127
                                                               DATA-TRANSFER-
LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-MRP-BUS-
SINGLE-CLOCK SEQUENCER ONLY-
                                                    ä
     128
     129
130
                                                               INPUT:
                                                                         DATA FOR PRE-SELECTED MRP DESTINATION
                                                               2(SP)
     131
     132.000250
                                                     LBMSC::
                                                                         2(SP),QR$LBR
#<Q$LBD+Q$LBP>,-(SP)
                                          176424
     133 000250
                                                               MOS.
                                                                                                         :MOVE-DATA TO-LOD-BUS-REG-..
:CLR-DRIVE AND-PULSE
:CLR-SELECTION-BITS-
                     016667
                               000002
                     012746
          000256
                                                               MOV.
     134
                               001001
                                                                          #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
#0$MRP2,(SP)
     135 000262
                     052716
                               000360
                                                               BIS
                                                                                                         ;SET NO-CLOCKS
;SELECT MRP
     136
137
          000266
000272
                     012746
052716
                                176000
                                                               MOV:
                               000240
                                                               BIS.
          000276
                                                                         CSR1
                                                               CALL
     139
                                                                          #Q$MNC,-(SP)
#{Q$MSC+Q$LBD>,-(SP)
     149
          000302
                     812746
                               140000
                                                               MOV-
                                                                                                         :CLEAR MRP NO+CLOCK BITS
          000306
     141
                     012746
                                                               MOV.
                               041000
                                                                                                         :SET-MRP-CLOCK-
          000312
                                                                         CSR1
                                                               CALL
     143
144
                                                               DE-SELECTION
     145
          000316
                     012746
                                                               MOV-
                                                                                                         :CLR.DRIVE AND.PULSE
     146
                               001001
                                                                          #<Q$LBD+Q$LBP>,-(SP)
                                                                                                         CLR SELECTION BITS
          000322
                     052716
                                000360
                                                                          #<Q$CSEL>,(SP)
                                                               B13
     148
          000326
                     012746
                                176000
                                                               MOV.
                                                                          #<Q$NCLK>,-(SP)
                                                                                                         :SET-NO-CLOCKS
      149
          000332
                                                               CALL
                                                                          CSR1
     150
                                                                                                         :MOVE RETURN ADDRÉSS DÓWN STACK
:POINT TO RETURN ADDRÉSS
     151 000336
                                                               MOV.
                                                                          (SP),2(SP)
                     011666
                               000002
     152 000342
153 000344
                     005726
                                                                          (SP)+
                                                               TST
                                                               RETURN.
```

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```
O M1110 27-MAR-80 15:12 PAGE 9
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
MRPSUB-
     155
    156
157
158
159
                                                                  DATA · TRANSFER · TO · LOD · BUS · REG · FROM · MRP
                                                                  OUTPUT:
                                                                             DATA FROM PRE-SELECTED MRP SOURCE
     160
    161
162
163
         000346
000346
000352
                                                       MRPLB::
                     012746
052716
012746
                                 001001
                                                                             #<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
#<Q$SNCLK>,-(SP)
                                                                  MOV-
                                                                                                              CLR DRIVE AND PULSE CLR SELECTION BITS SET NO-CLOCKS
                                000360
                                                                  BIS.
MOV:
          000356
                                176000
    165
166
          000362
                     052716
                                000240:
                                                                              #Q$MRP2,(SP)
                                                                                                               :SOURCE IS MRP
          000366
                                                                  CALL.
                                                                             CSR1
     167
     168
          000372
                     011646
                                                                  MOV.
                                                                             (SP),-(SP)
                                                                                                              :MOVE RETURN ADDR UP STACK :MOVE DATA ONTO STACK
    169 000374
170
                     016766
                                           000002
                                176424
                                                                  MOV:
                                                                             QR$LBR,2(SP)
                     012746
005046
          000402
                                000240
                                                                  MOV.
                                                                                                              ;CLEAR MRP SELECT:
;SET NOTHING:
                                                                             #Q$MRP2,-(SP)
    172.000406
173.000410
174.000414
                                                                  CLR .
CALL
                                                                             -(SP)
                                                                             CSR1
                                                                  RETURN.
```

```
MRPSUB- MACRO-M1110 27-MAR+80 15:12 PAGE-10
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     176
177
     178
179
                                                             MRP - CONTROL - REGISTER - LOADING -
     180
                                                             INPUT:
     181
                                                                       BIT-SETTING-FOR-MRP-CONTROL-REGISTER
                                                             2(SP)
     182
     183
         000416
                                                   MRPCR::
          000416
                    052766
                               100000
                                        000002
                                                             BIS
                                                                       #MNOBREG,2(SP)
                                                                                                      : INHIBIT - BRANCH - REGISTER - SELECT
     185
          000424
                    016667
012746
052716
     186
          000424
                              000002
001001
                                        .176424
                                                             MOV-
                                                                       2(SP),QR$LBR
                                                                                                     #CONTROL BITS DESTINED FOR MRP #CLEAR DRIVE AND PULSE #CLR SELECTION BITS
     187
          000432
                                                             \text{MOV}\cdot
                                                                       #<Q$LBD+Q$LBP>,-(SP)
          000436
                              000360
                                                             BIS.
                                                                       #<Q$CSEL>,(SP)
     189
          000442
                    012746
                              000040
                                                             MOV:
                                                                       #Q$MRP,-(SP)
     190
191
         000446
                                                             CALL
     192-000452-
                    005046
                                                             CLR
MOV
                                                                       -(SP)
                                                                                                      ;CLEAR·NOTHING:
;SET·PULSE
     193
          000454
                    012746
                              000001
                                                                       #Q$LBP,-(SP)
CSR1
     194
          000460
                                                             CALL
     195
     196
          000464
                    012746
                                                             MOV:
CLR:
CALL
                                                                                                                               AND PULSE
                              000041
                                                                       #<Q$MRP+Q$LBP>,-(SP)
                                                                                                      :CLEAR · CR · SELECTIEN
     197
          000470
                    005046
                                                                       -(SP)
                                                                                                      :SET-NOTHING
     198 000472
                                                                       CSR1
     199
     200
          000476
                    011666
                              0000021
                                                             MOV.
                                                                                                      :MOVE-RETURN-ADDRESS DOWN-STACK-
:POINT-TO-RETURN-ADDRESS
                                                                       (SP),2(SP)
     201 000502
202 000504
         000502
                                                             TST.
                                                                       (SP) +
                                                             RETURN.
     203
204
                    000001
                                                             .END
```

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```
MRPSUB- M
SYMBOL TA
              0 M1110 27-MAR-80 15:12 PAGE 10-1
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
ALUCKE = . 040006
                              BYTE42=-000052
                                                           BYTE94= 000136
                                                                                        PLR.EN= 000200
                                                                                                                      Q$RNC - = - 006000
ALU0E -- 004000
A01 -- 010000
                              BYTE43= 000053
                                                           BYTE95=-000137
                                                                                        QR$CR1=:176420
                                                                                                                      Q$RSC = 004000
                              BYTE44= nnnn54
                                                           BYTE96=-000140
                                                                                        QR$CR2=:176422
                                                                                                                      Q$RSET= 000010
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                              BYTE45 = . 000055
                                                           BYTE97 = . 000141
                                                                                         QR$LBR= · 176424
                                                                                                                      Q$SM = 100000
Q$SP = 000120
                              BYTE46 = . 000056
                                                           BYTE98 - 000142
                                                                                        Q$ATTN= 000100
                                                           BYTE99= 000143
                              BYTE47 = . 000057
                                                                                        Q$8CL - = - яяяяя 1
                                                                                                                      Q$SP2 - = -
                                                                                                                               000340
BIT10 = 002000
                              BYTE48 = . 000060
                                                           BYTVAL = 000144
CBKALL = 001000
                                                                                        Q$CCCP= 000040
                                                                                                                      RGQ:EN= 000200
BIT11 = 004000
                              BYTE49= 000061
                                                                                        Q$CHB - = 000400
                                                                                                                      RGQ.VA= _020000
BIT12 - 010000
                              BYTE5 = 000005
                                                           CBKCLK= 000400
                                                                                                                      SEQMM 000000RG
                                                                                        Q$CHRL= .000200
                                                                                                                                              002
BIT13 = 020000
                              BYTE50=-000062
                                                           CHOBRE = 100000
                                                                                        Q$CLR · = · AAAAAA
                                                                                                                      SEQ.CI=1000010
BIT14 = 040000
                              BYTE51= 000063
                                                           CPCCEN= 010000
                                                                                        Q$CNC - 030000
                                                                                                                     -S≸CLR = 000000
BIT15 = 100000
                              BYTE52= 000064
                                                           CPREAD = . 040000
CPWRTE = . 020000
                                                                                        Q$CP· = 000060
                                                                                                                      S$LA
                                                                                                                            = - 0000001
BIT2.
       = 000004
                              BYTE53= 000065
                                                                                        Q$CPCC=-000010
                                                                                                                      S$0B
                                                                                                                               999995
                                                                                        Q$CP2---000260
Q$CSC---010000
BIT3
        = 0000010
                              BYTE54= 000066
                                                           CSADRD = . 000004
                                                                                                                      S$0R
                                                                                                                             = . 000006
          000020
BIT4
                              BYTE55= 0000067
                                                           CSEQCI=-100000
                                                                                                                             = 000004
= 000007
                                                                                                                      S$QX
        = 000040
BIT5
                              BYTE56= 000070
                                                           CSOE - - 000040
                                                                                        Q$CSEL = . 000360
                                                                                                                      S#SR
                              BYTE57= 000071
        = 000100
                                                           CSR1
                                                                  = · ***** GX
                                                                                        Q$CSET= 0000002
                                                                                                                             - 000010
                                                                                                                      9$91
BIT7
        = 000200
                              BYTE58= 000072
                                                           CSWRTE= 000100
                                                                                        Q$CSP - = - 020000
                                                                                                                             = -000014
                                                                                                                      S$S2
        = 000400
                              BYTE59 - 000073
BYTE6 = 0000076
BITS
                                                           DBR:RD= 000001
                                                                                        Q$DMA:=:000001
                                                                                                                      TD$CTR≃-176370
          001000
                                                           DB$CPP--001457
                                                                                        Q$ENBK = . 040000
                                                                                                                      TD$CTW= 176360
TD$INL= 004000
BYTE0 = 000000
                              BYTE60= 000074
                                                           DB$SPT= 000026
                                                                                        Q$ENOP= 020000
BYTE: = 0000001
                              BYTE61= 000075
                                                           DB$TPC= 000023
                                                                                        Q$FAL - = - 004000
                                                                                                                      TD$MEM= 000270
BYTE10= 000012
                              BYTE62= 000076
                                                           DISPGS=-100000
                                                                                        D$FC: = 000045
                                                                                                                      TD$0AR= 176344
TD$0TR= 176346
BYTE11= 000013
                              BYTE63= 000077
                                                           DMAAWR= 000005
                                                                                        Q$F0 - 000044
BYTE12= 000014
                              BYTE64= 000100
                                                           DMARRD=-000003
                                                                                        Q$FP
                                                                                                                      TD$QRD=:000274
BYTE13= 000015
                              BYTE65= 000101
                                                           DMARUR = - 000004
                                                                                        Q$HBF - - 000002
                                                                                                                      TD$SW = 176376
BYTE14= 000016
                              BYTE66= 000102
                                                                  = 010000
                                                                                        Q$ICP -- 000006
                                                                                                                      TD$TAR= 176372 ∵
 BYTE15= 000017
                              BYTE67 = 000103
                                                           LBMRP .
                                                                     000152RG
                                                                                    002 Q$IHB -- 000003
                                                                                                                      TD$TAU= .176362
BYTE16= 000020
BYTE17= 000021
                              BYTE68= 000104
                                                           LBMSC -
                                                                     000250RG
                                                                                    002
                                                                                        Q$IHRL= 000002
                                                                                                                     ÷FD$TDR#€176374
                                                           LOC.EN= 000100
LOC.WA= 040000
LOC.WB= 100000
                              BYTE69= 000105
                                                                                        Q$IMRP= 999997
                                                                                                                      TD$TDW<sub>₹</sub>
T$⊖D
BYTE18= 000022
                              BYTEZ = 000002
                                                                                        Q$LBD - - 001000
                                                                                                                               000020
BYTE19= 0000023
                              BYTE70 - 000106
                                                                                        Q$LBDP= 001001
                                                                                                                      T$BA
                                                                                                                               000002
BYTE2 -- 000002
                              BYTE71= 000107
                                                           MAREN1 = . 000001
                                                                                        Q$LBP - - 000001
                                                                                                                               000010
                                                                                                                      T⊈BD
BYTE20 = . 000024
                              BYTE72= 000110
BYTE73= 000111
                                                           MAREN2 = . 004000
                                                                                        Q$LDCD= 000003
Q$LDMD= 000004
                                                                                                                      T$BSO - = - 100000
BYTE21 = 000025
                                                           MARLOD= 010000
MAROUT= 000002
                                                                                                                            = 900020
                                                                                                                      T$BT
BYTE22= .000026
                              BYTE74= 000112
                                                                                        Q$LDPP= 002000
                                                                                                                      T$BTAR= 000030
BYTE23= 000027
                              BYTE75= 000113
                                                           MAR.LO= 002000
                                                                                        Q$LHP -- 010000
                                                                                                                      T$8TD = 002000
BYTE24= 000030
                             BYTE76= 000114
BYTE77= 000115
                                                                                        Q$MNC -= 140000
                                                           MAR.OU--000040
                                                                                                                      T$CD = 000100
J$CLK = 002000
BYTE25= 000031
                                                           MBKALL= : 001000
                                                                                        Q$MR - - 000052
BYTE26= 0000032
                              BYTE78= 000116
                                                                                                                      T$DISK= 000200
T$DRD = 000004
                                                           MBKCLK= 000400
                                                                                        Q$MRP - = - 000040
BYTE27= 000033
                              BYTE79=-000117
                                                           MMADRD = : 888188
                                                                                        Q$MRP2=:000240
BYTE28= 000034
                              BYTE8 = 000010
                                                           MMLEFT= : 000002
                                                                                                                      T$EMEM= 010000
T$FSAA - 000000
                                                                                        Q$MSC -- 040000
BYTE29= 0000035
                              BYTE80 = . 000120
                                                                  = 0000004
                                                           MMOE
                                                                                        Q$MSET=_0000004
BYTE3 = 000003
                                                           MMWRTE= 000010
                                                                                        Q$MSP - 1009000
Q$MSP - 100900
Q$MCLK** 776000
                              BYTE81= 999121
                                                                                                                      T$FSA∰ = . 0000004
BYTE30=:000036
                              BYTE82=-000122
                                                           MNOBRE = 100000
                                                                                                                      T$FSAC≈ 000014
BYTE31 = 000037
                              BYTE83= 000123
                                                           MREN1 = 000001
                                                                                               = 000100,
                                                                                                                      T$FSB2= 000010
                                                                                        OSPP.
BYTE32= : 000040
                              BYTE84=-000124
                                                           MREN2 -=
                                                                    020000
                                                                                        Q$PPSW= 000320
0$PP2 = 000300
                                                                                                                      T$IB
BYTE33= 000041
                              BYTE85=:000125
                                                                     000416RG
                                                                                   992
                                                                                                                      T$IBAR= 000024
BYTE34= 0000042
                              BYTE86 = . 000126
                                                           MRPCRA -
                                                                    000424RG
                                                                                   002 · Q$QHLT= · 000013
                                                                                                                      T$18E - = - 020000
                              BYTE87 = 000127
BYTE35=.000043
                                                           MRPLB.
                                                                                   002 · Q$QL · = · 000043
002 · Q$QLA · = · 000053
                                                                     000346RG
                                                                                                                               040000
BYTE36 = . 000044
                              BYTE88= 000130
                                                           MRPSUB
                                                                                                                      T$ICD:=
                                                                                                                               000040
BYTE37= 000045
                              BYTE89 = . 000131
                                                           MS'YN -
                                                                  - 000040
                                                                                         Q$QLB·=·000054
                                                                                                                     T$MODE =
                                                                                                                               ัยต4คคค.
BYTE38= nnnn46
                              BYTE9 = 000011
                                                           N.
                                                                    000144
                                                                                        Q$QLR - = . 000001;
BYTE39= 000047
                                                                                               = 000042
                             BYTE90=:000132
                                                           PLB
                                                                                                                      T$0BE · = ·
                                                                                        Q$QW-
                                                                                                                               004000
BYTE4 = 000004
                             BYTE91=-000133
                                                           PLC:
                                                                  = 000020
                                                                                        Q$RDCD= 000005
                                                                                                                      T$08F . = .
                                                                                                                               010000
BYTE40= 000050
BYTE41= 000051
                             BYTE92= 000134
                                                           PLD
                                                                  = .000030
                                                                                        Q$RDMD = . 000006
                                                                                                                      T$0BRA= ∙000034
                                        PLRUR = 000200
Approved For Release 2005/07/12 : CIA-RDP85-09514R010200020001
                             BYTE93= 000135
                                                                                                                      Т$ОВЩА= 000032
```

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MRPSUB MACRO mili0 27-MAR-80 15:12 PAGE 10-2
SYMBOL TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
T$0UTA= 100000
                                             WORD18= 000044
                                                                                          WORD4 = @@@@in
                                                                                                                                      WORD61=-000172
T$RBD0= 000200
                                                                                                                                                                                  WORD82= 000244
                                            WORD19=-000046
WORD2-=-000004
WORD20=-000050
                                                                                          WORD40= 000120
                                                                                                                                     WORD62= 000174
WORD63= 000176
                                                                                                                                                                                  WORD83= 000246
T$RNB - = - 000040
                                                                                         WORD440= 000120

WORD41= 000124

WORD43= 000126

WORD43= 000130

WORD45= 000132
                                                                                                                                                                                  ₩0RD84= 000250
₩0RD85= 000252
T$RSET=:040000
T$SC: =:000022:
T$SCLK=:020000
                                                                                                                                     WORD64= 000200 WORD65= 000202 WORD66= 000204;
                                             WORD21= 000052
                                                                                                                                                                                 /WORD86=,000254
WORD87=,000256
WORD88=,000260
                                            WORD22=-000054
WORD23=-000056
WORD24=-000060
T$SEG1 = . 000000
T$SEG1=.000000
T$SEG2=.000001
T$SEG3=.000002
T$SO =.000001
T$UBUS=.100000
T$ICLK=.000400
                                                                                                                                     WORD67= 000206
                                                                                         WORD46= 000134
WORD47= 000136
WORD48= 000140
                                                                                                                                     WORD67 = 000210

WORD68 = 000210

WORD69 = 000212

WORD7 = 000016

WORD70 = 000214

WORD71 = 000216
                                                                                                                                                                                 WORD88= 000260
WORD89= 000262
WORD9= 000022
WORD90= 000264
WORD91= 000266
                                             WORD25= 000062
                                            WORD26 = 000064
WORD27 = 000066
                                                                                         WORD49= 000142
WORD5 = 000012
WORD50= 000144
                                             WORD28= 000070
                                                                                                                                                                                  WORD92= 000270
WORD93= 000272
WORD94= 000274
T$8BEN= 000020
                                            WORD29= 0000072
WORD3 = 000006
                                                                                                                                     WORD72= 000220
UBD.IN= 000020
                                                                                         WORD51=-000146
WORD52=-000150
WORD53=-000152
                                                                                                                                     WORD73= 000222
WORD74= 000224
WORD0 = 000000
WORD1 = 000002
                                             WORD30=.000074
                                                                                                                                                                                 WORD95=-000276
WORD96=-000300
WORD97=-000302
                                             WORD31= 000076
                                                                                                                                     WORD75 = 000226
WORD10= 000024
                                            WORD32= 000100
WORD33= 000102
                                                                                         WORD54= 000154
                                                                                                                                     WORD76= 000220
WORD77= 000232
WORD78= 000234
WORD11= 000026
WORD12= 000030
                                                                                         WORD55=-000156
WORD56=-000160
WORD57=-000162
                                                                                                                                                                                 WORD98= 000304
                                             WORD34= 000104
WORD13= 000032
                                                                                                                                                                                 WORD99=-000306
WRDVAL=-000310
                                            WORD35= 000106
WORD36= 000110
                                                                                                                                     WORD79=-000236
WORD8 =-000020
WORD80=-000240
WORD14= 000034
WORD15= 000036
                                                                                         WORD58 - 000164
                                                                                                                                                                                  WRTMM.
                                                                                                                                                                                                000066RG
                                                                                                                                                                                                                       002:
                                             WORD37=-000112
                                                                                         WORD59= 000166
WORD6 = 000014
                                                                                                                                                                                 XTREAD = . 001000
WORD16= 000040
                                            WORD38= 000114
WORD39= 000116
                                                                                                                                     WORD81=-000242
                                                                                                                                                                                 XTWRTE = . 000400
WORD17= 000042
                                                                                         WORD60= 000170
. ABS.
               000000
                                   000
               000000
                                   001
MRPSUB -
               000506
ERRORS DETECTED:
                                 Ø
VIRTUAL-MEMORY-USED: 3021 WORDS- (-12-PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:43
MRPSUB MRPSUB/+SP=[20.1]IM.[20.1]MRPSUB
                                                     ( 14 PAGES)
```

```
PPSUB- - MACRO - mil 110 27-MAR-80 15:26 - PAGE_5
                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                .FITLE..RPSUB....
.PSECT. PPSUB.
       2.000000
3
       4567
                                                                .MCALL WTSE$S,CLEF$S
                     000003
                                                     EFN.3
                                                                          3
       8
                                                               HARDWARE GUERY RESOLVER MANUAL DEBUGGING A IDS TO THE DEBUGGING A IDS TO THE THE DEBUGGING A INC.
      10
                                                                PIPELINE PROCESSORS SUBROUTINES
      11
      12
13
                                                               DATA TRANSFER
      14
                                                               LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-PPS-BUS
      15
16
                                                                INPUT:
      17
                                                               2(SP)
                                                                          DATA FOR PRE-SELECTED PPS DESTINATION
      18
      19
      20
          000000
                                                     LBPP::
      21
          000000
                    016667
                                                                                                          :MOVE DATA TO LOD BUS REG
:CLR DRIVE AND PULSE
:CLR SELECTION BITS
:SET NO-CLOCKS
                               000002
                                          176424
                                                               MOV.
                                                                          2(SP).QR$LBR
      22
          000006
                    012746
                               001001
                                                                          #<Q$LBD+Q$LBP>,-(SP)
                                                               MOV.
      23
24
          000012
                     052716
                               000360
                                                                          #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                                                               BIS
          000016
000022
                    012746
                                176000
                                                               MOV
      25
                    052716
                               000300
                                                               BIS
                                                                          #Q$PP2,(SP)
                                                                                                          :SELECT PP
      26
27
          000026
                                                               CALL
                                                                          CSR1
                    012746
012746
      28
          000032
                               006000
                                                                          #Q$RNC,-(SP)
#Q$LBD,-(SP)
                                                               MOV.
                                                                                                          ;CLEAR·CP·NO-CLOCK·BITS·
          000036
                               001000
                                                               MOV.
                                                                                                          ; SET. LOD. BUS. DRIVE
      30
          000042
                                                               CALL
                                                                          CSR1
      31
32
33
                                                               DE-SELECTION
                                                                                                         CLEAR DRIVE AND PULSE CLR SELECTION BITS SET NO-CLOCKS
          000046
                    012746
                               001001
                                                               MOV-
                                                                          #<Q$LBD+Q$LBP>,-(SP)
      35
36
          000052
                     052716
                               000360
                                                               BIS.
MOV:
                                                                          #<Q$CSEL>,(SP)
          000056
                    012746
                               176000
                                                                          #<Q$MCLK>,-(SP)
          000062
      38
         000066
000072
      39
                    011666
                               000002
                                                                          (SP),2(SP)
                                                               MOV.
                                                                                                          :MOVE-RETURN-ADDRESS DOWN-STACK-
:POINT-TO-RETURN-ADDRESS-
      40
                    005726
                                                                          (SP)+
         000074
                                                               RETURN
```

THE PARTY SHOW

Mark Mark

费物原定义, 法与

```
PPSUB-
                0-M1110 27-MAR-80 15:26 PAGE-6.
                                             Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
      43
44
45
                                                                  DATA - TRANSFER -
      46
47
48
                                                                  LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-PPS-BUS
                                                                  SINGLE CLOCK SEQUENCER ONLY
      49
      50
51
52
53
54
55
                                                                  2(SP)
                                                                             DATA FOR PRE-SELECTED PPS DESTINATION
          000076
                                                       ĹBPSC::
          000076
000104
                     016667
012746
                                                                                                              :MOVE DATA TO LOD BUS REG-
:CLEAR DRIVE AND PULSE:
:CLR SELECTION BITS:
:SET NO-CLOCKS:
:SELECT PD
                                 000002
                                           176424
                                                                  MOV
                                                                             2(SP).QR$LBR
                                 001001
                                                                  MOV:
                                                                             #<Q$LBD+Q$LBP>,
                     052716
012746
           000110
                                 000360
                                                                             #Q$CSEL,(SP)
#<Q$NCLK),-(SP)
                                                                  BIS.
      57
58
          000114
                                 176000
                                                                  MOV
          000120
                     052716
                                 000300
                                                                  BIS
                                                                             #Q$PP2,(SP)
      59
60
          000124
                                                                  CALL
                                                                             CSR1
                                                                                                              ; WRITE · CONTROL · REGISTER
      61
62
63
64
                     012746
012746
          000130
                                 006000
                                                                  MOV.
                                                                             #Q$RNC,-(SP)
                                                                                                              :CLEAR · PP · NO+CLOCK · BITS
          000134
                                 005000
                                                                  MOV.
                                                                             #<Q$RSC+Q$LBD>,-(SP)
                                                                                                              SET PP CLOCK
          000140
                                                                  CALL
                                                                             CSR1
      65
66
                                                                  DE-SELECTION
      67
           000144
                      012746
                                 001001
                                                                             #<Q$LBD+Q$LBP>,-(SP)
#Q$CSEL,(SP)
#<Q$NCLK>,-(SP)
                                                                  MOV.
                                                                                                              :CLEAR · DRIVE · AND · PULSE
      68
          000150
                      052716
                                 000360
                                                                  BIS.
                                                                                                              CLR-SELECTION-BITS
SET-NO-CLOCKS
      69 000154
70 000160
71
72.000164
73 000170
                      012746
                                 176000
                                                                  MOV.
                                                                  CALL
                                                                             CSR4
                                                                             (SP),2(SP)
                                                                                                              :MOVE RETURN ADDRESS DOWN:STACK
:POINT TO RETURN ADDRESS
                      011666
                                 000002
                                                                  MOV.
                      005726
                                                                  TST.
                                                                             (SP)+
          000172
                                                                  RETURN.
```

```
PPSUB- - MACRO - 711110 27-MAR-80 15:26 PAGE - 7
                                                 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
       76
77
78
79
80
81
82
                                                                         DATA · TRANSFER · TO · LOD · BUS · REG · FROM · PPS ·
                                                                         OUTPUT:
                                                                         (SP)
                                                                                    DATA FROM PRE-SELECTED PPS SOURCE
       83
84
85
           000174
000174
                                                            PPLB::
                        012746
052716
012746
                                    001001
                                                                        MOV-
                                                                                    #<Q$LBD+Q$LBP>,-(SP)
#Q$CSEL,(SP)
#<Q$NCLK>,-(SP)
                                                                                                                         :CLEAR · DRIVE · AND PULSE ·
       86
            000200
                                    000360
176000
                                                                         BIS
                                                                                                                         CLR SELECTION BITS
SET NO-CLOCKS
            000204
                                                                        MOV-
       88
           000210
                        052716
                                    000300
                                                                        BIS.
                                                                                     #Q$PP2,(SP)
           000214
000220
       89
                                                                                    CSR1
(SP),-(SP)
QR$LBR,2(SP)
                                                                        CALL
       90
                       011646
016766
                                                                                                                         MOVE RETURN ADDR UP STACK
MOVE DATA ONTO STACK
                                                                        MOV.
      90 000220
91 000222
92
93 000230
94 000234
95 000236
96 000242
            000222
                                    176424
                                                000002-
                        012746
                                                                        MOV.
                                                                                                                         :CLEAR · PP · SELECT · SET · NOTHING ·
                                                                                    #Q$PP2,-(SP)
-(SP)
                        005046
                                                                        CLR.
                                                                                    CSR1
                                                                        RETURN.
```

"一种"被加强"特别"的"大学"的"大学"。

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PPSUB- . . P
               O-M1110
                           27-MAR-80 15:26 PAGE 8
                                          Approved For Release 2005/07/12—CIA-RDP85-00514R000200020001-3
     98
99
100
                                                              PPS-CONTROL-REGISTER-LOADING
     101
     102
     193
                                                                         BIT-SETTING FOR PPS CONTROL REGISTER
                                                               2(SP)
     104
     105
     106
          000244
                                                    PPCR::
     107
          000244
                     016667
                               000002
                                                               MOV.
                                                                         2(SP),QR$LBR
                                                                                                        #CONTROL BITS DESTINED FOR PPS
#CLEAR DRIVE AND PULSE
#CLE SELECTION BITS
     108 000252
109 000256
                    012746
052716
                               001001
000360
                                                              MOV.
BIS.
MOV.
                                                                         #<Q$LBD+Q$LBP>,-(SP)
                                                                         #Q$CSEL,(SP)
#Q$PP,-(SP)
     110 000262
111 000266
                     012746
                                                                                                        :SELECT-PP
          000266
                                                               CALL
                                                                         CSR1
     113 000272
                     005046
                                                               CLR
                                                                         -(SP)
                                                                                                        :GLEAR - NOTHING
     114 000274
115 000300
                               000001
                     012746
                                                              MOV-
                                                                         #Q$LBP,-(SP)
                                                                                                        :SET-PULSE
                                                               CALL
     116
117 000304
118 000310
                     012746
                               000101
                                                              MOV.
                                                                         #<Q$PP+Q$LBP>,-(SP)
                                                                                                        :CLEAR CR SELECTION AND PULSE
                     005046
                                                               CLR -
                                                                                                        ;SET-HOTHING . _ 🚉
     119
          000312
                                                                         CSR1
                                                               CALL
     120
121 000316
                     011666
                                                               MOV.
                               000002
                                                                         (SP),2(SP)
                                                                                                        ; MOVE · RETURN · ADDRESS · DOWN · STACK
; POINT · TO · RETURN · ADDRESS ·
          000322
                     005726
                                                               TST.
                                                                         (SP)+
     123 000324
                                                               RĒTURN.
```

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PPSUB- MACRO-M1110 27-MAR-80 15:26 PAGE-9
                                         Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     125
     126
127
                                                            SELECT-A-QLB PAGE-
     128
                                                                                                                  · *,
     129
                                                            UPON ENTRY:
     i30
                                                            2(SP) = PAGE NUMBER UPON EXIT:
                                                                                                        PERSONAL PROPERTY.
     131
     132
133
                                                             STACK RESTORED
                                                                                                           4
                                                             R1. R2 DESTROYED
     135
     136
          000326
                                                  SELPG::
     137
          000326
                    005046
                                                            CLR ·
                                                                       -(SP)
                                                                                                     :START-MICROCODE, AT 0
          000330
                                                             CALL
                                                                       SERCS.
     139
          000334
                    005046
                                                            CLR
                                                                       -(SP)
                                                                                                     :RESET.BR. INHIBIT.
     140
          000336
                                                             CALL
                                                                       CPCR
          000342
     141
                    012746
                              000377
                                                            MOV.
                                                                       #377,-(SP)
                                                                                                     :SET-MRP.MICRO-ADDRESS-=-X'FF' (JUMP-SELF)
     142
          000346
                                                             CALL
                                                                       SEQMM-
-(SP)
     143
          000352
                    005046
                                                             CLR.
                                                                                                     ; RESET · BR · INHIBIT ·
          000354
     144
                                                             CALL
                                                                       MRPCR
     145
          000360
                    012767
                              001000
                                        176422
                                                                       #Q$REBK,QR$CR2
                                                             MOV
                                                                                                     :RE-ARM INTERRUPTS
                    012767
012746
                                                                       #<Q$SM+Q$ENOP>,QR$CR2
     146
          000366
                              120000
                                         176422
                                                                                                     SET SEARCH MODE + ENABLE INTERRUPTS:
CLEAR ALL SELECTIONS
CLEAR DRIVE AND PULSE
CLEAR CP NO-CLOCK
SET NOTHING
                                                             MOV
          000374
                              000360
                                                             MOM
                                                                       #Q$CSEL,-(SP)
     148
          000400
                    052716
                              001001
                                                             BIS
                                                                       #<Q$LBD+Q$LBP>,(SP)
     149
          000404
                    052716
                              030000
                                                             BIS
                                                                       #Q$CNC,(SP)
          000410
     150
                    005046
                                                             CLR
                                                                        -(SP)
     151
          000412
                                                             CALL
                                                                       CSR1
     152
     153
          000416
                    012767
012767
                                                                       #Q$LDCD.QR$LBR ;MOVE.ATTN_CODE.TO.LOD.BUS.REG
#<Q$ATTN+Q$SM+Q$ENOP>.QR$CR2.;SET.ATTN.CODE.READY
                              000003
                                        176424
                                                             MOV
          000424
                              120100
                                        176422
                                                            MOV
     155
          000432
                    016701
                               176422
                                                             MOV.
                                                                       ORSCR2.R1
                                                                                                     ;READ CSR2
     156
157
          000436
                    032701
                              000100
                                                                       #Q$ATTN,R1
                                                                                                     #ATTN - CLEAR
          000442
                    001373
                                                             BHE
                                                                       1$
                                                                                                     :NO. READ AGAIN
          000444
     159
                    012767
                               000041
                                         176424
                                                             MOV
                                                                       #041,QR$LBR: ;CD-MEMORY START-ADDRESS: #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET-CC:TO-CP-QR$CR2.R1 ;READ CSR2 ;IS-CC-TO-CP-CLEAR:
                                                                                                                                     =X1211
     160
          000452
                    012767
                               120040
                                         176422
                                                            MOV:
     161
          000460
                    016701
                              176422
                                                  2$:
                                                            MOV-
                    032701
     162
          000464
                              000040
                                                             RIT
     163
          000470
                    001373
                                                                                                     :NO, READ AGAIN
                                                             BHE
                                                                       2$
     164
     165
          000472
                    012767
                              000001
                                         176424
                                                             MOV
                                                                       #1.QR$LBR
                                                                                                     :TRANSFER COUNT -= 1 WORD
     166
          000500.
                              120040
                    012767
                                       176422
                                                            MOV
                                                                       #<Q$CCCP+Q$SM+Q$ENOP>,
QR$CR2,R1
                                                                                                  QR$CR2:;SET.CC.TO.CP.
     167
          00050€
                    016701
                              176422
                                                  3$:
                                                            MOV
                                                                                                     :READ CSR2
     168
          000512
                    032701
                              000040
                                                             BIT
                                                                       #Q$CCCP,R1
                                                                                                     :IS.CC.TO.CP.CLEAR:
:NO. READ.AGAIN:
     169
          000516
                    001373
                                                                                                                                     170
                                                                                                     PUT-PAGE-VALUE-INTO BUFFER-
MICROCODE REINCREMENTS-
CC-MEMORY DATA-BUFFER-
          000526
                    016667
                              000002
                                        -000000G-
                                                                       2(SP),DATA1
                                                             MOV:
     172 \cdot 000526
                    005367
                              000000G
                                                             DEC.
                                                                       DATA1
     173 000532
                    012767
                              000000G-176424
                                                             MOV
                                                                       #DATA1,QR$LBR
     174
          000540
                    012767
                              120040
                                        176422
                                                                       #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP
     175
     176
177
                                                            WAIT-FOR - INTERRUPT - FROM - CP -
     178
          000546
                                                            WTSE$S: #EFN.3
                                                                                                                             Destriction of the
                                                                                                                                                      N(0)
                                                                                                                                                            Kar tu
     179
                                                                                                                                                 1
          000560
     180
                                                            CLEF$S - #EFN.3
                                                                                                                                             $ 18
                                                                                                                                         1
```

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PPSUB-
              0.M1110 27-MAR-80 15:26 PAGE.9-1
                                        Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
    182
                                                          RE-ARM INTERRUPTS
    183
         000572
                   012767
                             100400
                                       176422
                                                          MOV.
                                                                    #<Q$SM+Q$CHB>,QR$CR2
#<Q$SM+Q$REBK>,QR$CR2
                                                                                                 :CLEAR · INTERRUPT · (USE · HIT · BUFFER · INT)
    185
         000600
                   012767
                             101000
                                       176422
                                                                                                 ;RE-ARM-
    186
         000606
                                                                    #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2:;ENABLE
                   012767
                             160000
                                       176422
                                                          MOV
    188
         000614
                   005046
                                                          GLR
                                                                    -rspn
                                                                                                  :CLEAR · NOTHING · IN · CSR1
         000616
000622
     189
                   012746
                             176000
                                                          MOV
                                                                    #Q$NCLK,−(SP)
                                                                                                 ;SET-NO-CLOCKS
     190
                                                          CALL
                                                                    CSR1
         000626
                   005067
                             176422
                                                          CLR -
                                                                    QR$CR2
                                                                                                 :SET LOAD MODE
    192
     193
         000632
                                                                    #1761,-(SP)
                   012746
                             001761
                                                          MOV
                                                                                                 #START-CP-AT-X-13F11
         000636
                                                          CALL
CLR
                                                                    SEQUS
     195
         000642
                   005046
                                                                    -(SP)
                                                                                                 :RESET.BR.INHIBIT
     196
         000644
                                                          CALL
                                                                    CPCR
         000650
                   012746
                             000377
                                                          MOV.
                                                                                                 :SET-MRP-MICRO-ADDRESS-=-X*FF:
                                                                           (SP)
                                                                                                                                       (JUMP SELF)
     198
         000654
                                                          CALL.
                                                                    SEQMM.
     199
         000660
                   005046
                                                          CLR
                                                                    -(SP)
                                                                                                 ; RESET · BR · INHIBIT ·
     200
         000662
                                                          CALL
                                                                    MRPCR
         000666
                   012767
                             001000
                                       176422
                                                          MOV-
                                                                    #Q$REBK,QR$CR2
                                                                                                 ;RE-ARM. INTERRUPTS
                   012767
012746
                                                                                                 SET SEARCH MODE + ENABLE INTERRUPTS
SCLEAR ALL SELECTIONS
CLEAR DRIVE AND PULSE
CLEAR CP AND PPS NO-CLOCKS
    202 000674
                             120000
                                       176422
                                                          MOV
                                                                    #<Q$SM+Q$ENOP>,QR$CR2
#Q$CSEL,-(SP)
    203
         000702
                             000360
                                                          MOV
         000706
                   052716
                             001001
                                                                    #<Q$LBD+Q$LBP>,(SP)
                                                          BIS
                   052716
    205
         000712
                             036000
                                                          BIS.
                                                                    #<Q$RNC+Q$CNC>,(SP)
         000716
000720
    206
                   005046
                                                          ČĹŘ
                                                                    -(SP)
                                                                                                 :SET-NOTHING-
    207
    208
    209
210
                                                          WAIT-FOR-A-TIME
    211 000724
212 000730
213 000732
                   012701
                             000144
                                                          MOV
                                                                    #100..R1
                                                                                                  :L00P-100 TIMES
                   005002
                                                          CLR
                                                                                                  : ADD NOTHING
                   060202
                                                 4$:
                                                          ADD
                                                                    R2,R2
    214
         000734
                   005301
                                                          DEC
                                                                    P1
                                                                                                                                  -
    215
216
         000736
                   001375
                                                          BNE
                                                                    4$
    217
         000740
                   005046
                                                          CLR
                                                                    -(SP)
                                                                                                  :CLEAR - NOTHING - IN - CSR1
    218
219
         000742
                             176000
                   012746
                                                          MOV.
                                                                    #Q$NCLK,-(SP)
                                                                                                  ;SET-NO-CLOCKS
         000746
                                                          CALL
                                                                    CSR 1
    220
         000752
                   005067
                             176422
                                                                    QR$CR2
                                                                                                  SET LOAD MODE
    221
         000756
                   011666
                             000002
                                                          MOV-
                                                                    (SP),2(SP)
                                                                                                  :MOVE RETURN ADDRESS DOWN STACK
         000762
000764
    223
                   005726
                                                          TST
                                                                    (SP) +
                                                                                                  :POINT TO RETURN ADDRESS
    224
225
                                                          RETURN
    226
                   000001
                                                          .END
```

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PPSUB- MACRO M1110 27-MAR-80 15:26 PAGE 9-2. SYMBOL TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
ALUCKE = . 040000
                                BYTE42'= .000052.
BYTE43= .000053
                                                                BYTE94= 000136
                                                                                                PLR.EN= 000200
                                                                                                                                Q$RDMD = . 000006
ALUŪE - 004000
A01 - 010000
                                                                BYTE95= 000137
                                                                                                                           002 · Q$REBK = · 001000
002 · Q$RNC · = · 006000
                                                                                                PPCR
                                                                                                           000244RG
                                BYTE44= 000054
                                                                BYTE96= 000140
                                                                                                PPLB
                                                                                                           000174RG
BITVAL = . 000000
                                BYTE45= 0000055
                                                                BYTE97= 000141
BIT0 = 000001
BIT1 = 000002
                                                                                                                                Q#RSC- = 004000
                                                                                                QR$CR1=:176420
                                BYTE46=-000056
BYTE47=-000057
                                                                BYTE98= 000142
                                                                                                QR$CR2= 176422
                                                                                                                                Q$RSET=:000010
                                                                BYTE99=-000143
                                                                                                OR$LBR= 176424
                                                                                                                                Q$SM = 100000
Q$SP = 000120
BIT10 = 002000
BIT11 = 004000
                                                                BYTVAL = 000144
                                BYTE48= 000060
                                                                                                Q$ATTN= 000100
                                BYTE49= 000061
                                                                CBKALL = 001000
                                                                                                Q$BCL - - 000001
Q$CCCP - 000040
                                                                                                                                Q$SP2 - 000340
BIT12 - - - 010000
                                BYTE5 = 000005
                                                                CBKCLK= 000400
                                                                                                                                RGQ.EN= 000200
BIT13 = 020000
                                BYTE50= 000062
                                                                CNOBRE = 100000
                                                                                                Q$CHB -- 000400
                                                                                                                                RGQ.VA= 020000
SELPG 000326
BIT14 = 040000
BIT15 = 100000
                                BYTE51= 000063
                                                                CPCCEN= 010000
                                                                                                Q$CHRL= 000200
                                                                                                                                                           002
                                                                                                                                          000326RG
                                BYTE52=-000064
                                                                CPCR+ = + ***** GX
                                                                                                Q$CLR - = - 000040
Q$CNC - = - 030000
                                                                                                                                SEQCS:=
                                                                                                                                          жжжжжж БХ
       = 000004
                                BYTE53= 000065
BIT2.
                                                                CPREAD = . 040000
                                                                                                                                SEQMM = ЖЖЖЖЖЖ GX
        = 0000010
                                BYTE54= 000066
                                                                CPWRTE = : 020000
                                                                                                Q$CP
                                                                                                        = 000060
                                                                                                                                SEQ.CI= AAAAAA
        = 000020
BIT4
                                BYTE55= 000067
                                                                CSADRD = . 000004
                                                                                                Q$CPCC=:000010
                                                                                                                                S$CLR -=
                                                                                                                                          000000
         - 0000046
BIT5
                                BYTE56= 000070
BYTE57= 000071
                                                                 CSEQCI= 100000
                                                                                                Q$CP2 -- 000260
Q$CSC -- 010000
                                                                                                                                S$LA
                                                                                                                                       = 0000001
                                                                CSOE - 000040
CSR1 = ********* GX**
           000100
        = · 000200
= · 000400
                                                                                                                                S$08
                                                                                                                                       999995
BIT7
                                BYTE58= 000072
                                                                                                Q$CSEL = . 000360
                                                                                                                                RITA
                                BYTE59= 000073
                                                                CSWRTE = . 000100
                                                                                                Q$CSET= 000002
Q$CSP = 020000
         - 001000
BIT9
                                BYTER = . 000006
                                                                DATA: = ****** GX
        = 0000000
                                BYTE60= 000074
                                                                DBR.RD= 000001
                                                                                                Q$DMA - = . 000001
                                                                                                                                        = 0000100
                                                                                                                                9391
BYTE! = 000001
                                BYTE61=:000075
                                                                DB$CPP= 001457
                                                                                                Q$ENBK = 040000
                                                                                                                                        ÷-000014
                                                                                                                                9,$92
BYTE10= 000012
                                BYTE62= 000076
                                                                DB$SPT=-000026
                                                                                                Q$ENOP = . 020000
                                                                                                                                TD$CTR= 176370
TD$CTW= 176360
TD$INL= 004000
BYTE11= 000013
                                BYTE63= 000077
                                                                DB$TPC=-000023
                                                                                                Q$FAL = 004000
Q$FC = 000045
Q$FO = 000044
BYTE12= 000014
                                BYTE64= 000100
BYTE65= 000101
                                                                DISPGS = 100000
BYTE13= 000015
                                                                                                Q$F0 = 000044
Q$FP = 7000045
Q$HBF = 000002
                                                                DMAAWR = . 000005
                                                                                                                                 TD$MEM='.000270
BYTE14= 000016
                                BYTE66= 000102
                                                                DMARRD = · AAAAA3
                                                                                                                                TD$0AR= 176344
BYTE15= 000017
                                BYTE67= 000103
                                                                DMARWR = . 000004
                                                                                                                                TD$0TR= 176346
BYTE16= 000020
                                BYTE68= 000104
                                                                EFN.3 = 000003
ENBR = 010000
LBPP 000000RG
                                                                                                Q$ICP -- 000002
                                                                                                                                TD$QRD=-000274
TD$SW-=-176376
BYTE17= 000021
BYTE18= 000022
                                BYTE69= 000105
                                                                                                Q$IHB -- 000003
                                BYTE7 = 000007
                                                                                           002.Q$IHRL=.000002
                                                                                                                                TD$TAR=:176372
BYTE19= 0000023
                                BYTE70= 000106
                                                                LBPSC-
                                                                           000076RG
                                                                                                Q$IMRP= 000007
                                                                                           002
                                                                                                                                TD$TAW= 176362
BYTE2 - = - 0000002
                                BYTE71= 000107
                                                                LOC.EN= 000100
LOC.WA = 040000
LOC.WB= 100000
                                                                                                Q$LBD - - 001000
                                                                                                                                TD$TDR= · 176374
BYTE20 = · 000024
                                BYTE72= 000110
                                                                                                Q$LBDP= 001001
Q$LBP = 001001
                                                                                                                                 TD$TDW≕ 176364
BYTE21 = . 000025
                                BYTE73= .000111
                                                                                                                                T$AD = 000020
BYTE22=-000026
                                BYTE74= 000112
                                                                MAREN1 = . 000001
                                                                                                Q$LDCD= 000003
                                                                                                                                T&BA
                                                                                                                                        -- 0000002
BYTE23= 0000027
                                BYTE75= 000113
                                                                MAREN2= 004000
                                                                                                Q$LDMD= 0000004
                                                                                                                                        = 0000002
= 000010
                                                                                                                                Æ$BD
BYTE24= 000030
                                BYTE76=-000114
                                                                MARLOD = 010000
                                                                                                                                T$B$0 ≈ 100000
T$B$T = 888833
                                                                                                Q$LDPP=:002000
Q$LHP:=:010000
Q$MNC:=:140000
BYTE25= 000031
                                BYTE77= 000115
BYTE78= 000116
                                                                MAROUT = . 000002
                                                                                                                                T$BT
                                                                                                                                       = 000020
BYTE26= 000032
                                                                MAR.LO= 002000
MAR.OU= 000040
                                                                                                                                T$BTAR= 000030
BYTE27=-000033
                                BYTE79= 000117
                                                                                                Q$MR· = 000052
Q$MRP·= 000040
                                                                                                                                T$BTD = 002000
T$CD = 000100
T$CLK = 002000
BYTE28= 000034
                                BYTE8 = 000010
                                                                MBKALL = 001000
BYTE29= 0000035
BYTE3 = 000003
                                BYTE80= 000120
BYTE81= 000121
                                                                MBKCLK = · 000400
                                                                                                Q$MRP2=-000240
Q$MSC-=-040000
                                                                MMADRD= 000100
MMLEFT= 000002
                                                                                                                       - 中 本版 E T$DISK= 000200
T$DRD = 000004
BYTE30 - 000036
BYTE31 - 000037
                                BYTE82= 000122
                                                                                                Q$MSET= 000004
Q$MSP = 100000
                                BYTE83= 000123
BYTE84= 000124
                                                                        = 000004
                                                                                                                                T$EMEM= 010000
BYTE32= 000046
                                                                MMURTE = 0000010
                                                                                                Q$NCLK= 176000
                                                                                                                                Т$FSAA=∴ ЯЙЯЯЯЯ
BYTE33=.000041
                                BYTE85= 000125
                                                                MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
                                                                                                Q$PP = 000100
                                                                                                                                T$FSAB= 000004
                                BYTE86 = 000126
BYTE87 = 000127
BYTE34= 000042
                                                                                                Q$PPSW= 000320
                                                                                                                                T$FSAC=:000014
BYTE35= 000043
                                                                                                Q$PP2 - = . 000300
                                                                                                                                T$FSB2≕ 000010
BYTE36= 000044
                                BYTE88= 000130
                                                                Q$QHLT= 000013
                                                                                                                                        - 000026
                                                                                                                                T$IB
BYTE37= 000045
BYTE38= 000046
                                BYTE89=-000131
                                                                MSYN - - 000040
                                                                                                0$QL · = · 000043
Q$QLA · = · 000053
                                                                                                                                 T$IBAR=.000024
                                BYTE9 = 000011
                                                                        = 000144
                                                                                                                                T$IBE - = - 020000
BYTE39= 000047
                                BYTE90=-000132
                                                                                                Q$QLB.=.000054
Q$QLR.= 000001
                                                                PLa.
                                                                        = 0000010
                                                                                                                               √$IBF = 040000 g.
T⊈ICD = 000040
BYTE4 = 000004
                                BYTE91=-000133
                                                                        = - 000020
                                                                PLC:
BYTE40= 000050
BYTE41= 000051
                                BYTE92= 000134
                                                                PLD.
                                                                        = .000030
                                                                                                Q$QW· = 000042.
                                                                                                                                 T$MODE= 004000
                                BYTE93=-000135
                                            PLRWR⋅ = ⋅ 000200 0⊈RDCD = ⋅ 000005
Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
```

```
PPSUB- - - M
SYMBOL - TA
                               27-MAR-80 15:26 PAGE 9-3
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                  0 · M1110
T$0BE---004006
                                     WORD15=-000036
                                                                         WORD37=-000112
                                                                                                              WORD59=-000166
                                                                                                                                                   WORD80= 000240
T$0BF·=·010000
T$0BRA=·000034
T$0BWA=·000032
                                    WORD15-000030
WORD16-000040
WORD17-000042
                                                                                                             WORD55 - 00010

WORD66 - 000170

WORD61 - 000172
                                                                         WORD38= 000114
WORD39= 000116
                                                                                                                                                  WORD81= 000242
WORD82= 000244
                                    WORD18=-000044
WORD19=-000046
WORD2-=-000004
                                                                         WORD4 - 000010
T$08WH= 000032
T$0UTA= 100000
T$RBD0= 000200
T$RNB = 000040
T$RSET= 040000
                                                                                                                                                   WORD83= 000246
                                                                         WORD40= 000120
WORD41= 000122
WORD42= 000124
                                                                                                              WORD62= 000174
                                                                                                                                                  WORD84= 000250
WORD85= 000252 ≟ ≓े
                                                                                                              WORD63= 000176
                                    WORD20= 000050
WORD21= 000052
                                                                                                             WORD64= 000200
WORD65= 000202
                                                                                                                                                  WORD86= 000254
                                                                         WORD43= 000126
T$SC: =:00002
T$SC: =:000022
T$SCLK=:020000
T$SEG: =:000000
T$SEG: =:000001
                                                                                                                                                  WORD87= 000256
                                     WORD22= 000054
                                                                         WORD44= 000130
WORD45= 000132
                                                                                                              WORD66 = 000204
                                                                                                                                                  WORD88≃ 000260
                                     WORD23= 000056
                                                                                                                                                  WORD89= 000262
WORD9 = 000022
                                                                                                              WORD67= 000206
                                    WORD24= 000060
WORD25= 000062
                                                                         WORD46 = 000134
                                                                                                             WORD68= 000210
WORD69= 000212
WORD7 = 000016
                                                                         WORD47 - 000136
                                                                                                                                                  WORD90--000264
T$SEG3=-000002
                                     WORD26= 000064
                                                                         WORD48=-000140
                                                                                                                                                  WORD91= 000266
T$SO: = 000001
T$UBUS= 100000
                                     WORD27=-000066
                                                                         WORD49 = 000142
                                                                                                              WORD70= 000214
                                                                                                                                                  WORD92= 000270
                                     WORD28= 000070
                                                                         WORD5 - 000012
                                                                                                             WORD71= 000216
WORD72= 000220
                                                                                                                                                  WORD93= 000272
T$1CLK= 000400
                                    WORD29= 000072
WORD3 = 000006
                                                                         WORD50= 000144
                                                                                                                                                  WORD94= 000274
T$8BEN= · 000020
                                                                         WORD51= 000146
WORD52= 000150
                                                                                                              WORD73= 000222
UBD:IN= 000020
WORD0 = 000000
WORD1 = 000002
                                                                                                                                                  WORD95= 000276
                                     WORD30= 000074
                                                                                                                                                 WORD74= 000224
                                    WORD31=-000076
WORD32=-000100
                                                                         WORD53= 000152
                                                                                                             WORD75=-000226
WORD76=-000230
WORD77=-000232
                                                                         WORD54= 000154
WORD10= 000024
WORD11= 000026
                                     WORD33= 000102
                                                                         WORD55=-000156
                                                                                                                                                  WORD99= 000306.
                                     WORD34= 000104
                                                                         WORD56= 000160
                                                                                                             WORD78=-000234
WORD79=-000236
WORD8 =-000020
                                                                                                                                                  WRDVAL = . 000310
WORD12= 000030
                                    WORD35 - 000106
                                                                         WORD57= 000162
                                                                                                                                                   KTREAD= 001000
WORD13= 000032
                                    WORD36=-000110
                                                                         WORD58= 000164
                                                                                                                                                  XTWRTE = . 000400
WORD14= 0000034
. ABS:
            000000
                             000
            000000
                             001
                                                                                                                                                       24
                                                                                                                                                            7
PPSUB.
            000766
                             002
ERRORS · DETECTED:
                           0
VIRTUAL MEMORY JSED: 3288 WORDS (13 PAGES)
DYNAMIC MEMORY: 3860 WORDS (14 PAGES)
ELAPSED TIME: 00:00:46
```

PPSUB, PPSUB/-SP=[20.1]IM, [20.1]PPSUB

MRP ..

12 13

16 17

34 35 36

HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS MATCH REPORT PROCESSOR ROUTINES.

PARSE THE COMMAND LINE AND TRANSFER CONTROL TO ONE OF THE MRP SUB-MODULES OR BACK TO OMAIN. CONTROL COULD HAVE BEEN PASSED TO MRP IN ONE OF THREE WAYS:

1. FROM OMAIN IF MRP WAS SELECTED AS THE FIRST PROCESSOR UPON ENTRY TO THE PROGRAM.

>MR LD MD 0

FROM QMAIN IF MRP WAS SELECTED FROM ONE OF QMAIN'S OTHER: SUB-MODULES:
CP>MR:LD:MD:0

3. ON:RETURN FROM:ONE:OF:MRP*S:SUB-MODULES
MR>LD:MD:0

MRP PARSES AT THE SECOND LEVEL OF CONTROL (SEE NOTES AT QMAIN ON LEVELS OF CONTROL). IN THE EXAMPLES ABOVE, MRP WOULD PARSE 'LD' AND TRANSFER CONTROL TO THE MRP SUBMODULE MRLD. IF MRP SHOULD ENCOUNTER A STRING WHICH IS NOT A VALID COMMAND MNEMONIC, MRP CONSIDERS THE STRING TO BE A PROCESSOR MNEMONIC AND RETURNS CONTROL TO QMAIN, EGINMAYOR OF IS NOT A VALID MRP (SECOND TEVEL) COMMAND MRP RETURNS CONTROL TO QMAIN WHICH THE THEN WILL TRANSFER CONTROL TO ITS SUB-MODULE CP.

MRP-SUB-MODULES: MRLD- LOAD MEMORIES

MRPR

PRINT MEMORY CONTENTS REMAINING COMMANDS (EXCEPT DEBUGGING)
DEBUGGING COMMANDS MRREST.

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```
MACRO M1110 27-MAR-80 15:11 PAGE 6
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MRP -
      39
40
      41
42
43
44
45
46
47
                                                              TABLE OF MRP COMMAND MNEMONICS AND THEIR ASSOCIATED ROUTINE
          000000
000000
                                                    MRTBL:
                        101
                                   124
                                                              .ASCII.
                                                                                             :SET BREAKPOINT
          000002
                     000000G
                                                              .WORD
.ASCII
                                                                        AT1
      48
          000004
                                   106
                                                                        20E2
                                                                                              DISABLE BREAKPOINT
      49
50
51
                     000000G
          йййййй б
                                                              .WORD
                                                                        OF I
          000010
                        123
                                   123
                                                               .ASCII
                                                                                             :SINGLE - STEP -
          000012
                     000000G
                                                              .WORD
.ASCII
.WORD
                                                                        SSI
      52
53
54
          000014
000016
                                   117
                                                                        /GO/
GO1
                                                                                             :PROCEED FROM BREAKPOINT
                    000000G
          000020
                                   124
                                                               .ASCII
                                                                                             :STORE · INTO · A · REG ·
      55
56
57
          000022
                     000000G
                                                              .WORD
          000024
000026
                        122
                                   105
                                                                        /RE/
                                                                                             :READ FROM A REG
                     อออออออ
                                                              .WORD
                                                                        REI
      58
59
60
          000030
                        114
                                   104
                                                              .ASCII.
.WORD.
.ASCII.
                                                                                             :LOAD MEMORY
          000032
000034
000036
                     000000G
                                                                        LD1
                    120
000000G
                                   122
                                                                        ZPR.
                                                                                             :PRINT.FROM.MEMORY
      61
                                                               .WORD
                                                                        PR1
          000040
                        122
                                   123
                                                              .ASCII
.WORD
                                                                                             :RESET-
      63
64
          000042
000044
                     000000G
                                                                        RS1
                        103
                                   114
                                                              .ASCII
                                                                        ZCLZ
                                                                                             :CALL QR LOADER
                     000000G
      65
          000046
                                                              .WORD
      66
                     000012
                                                   MRHUM.
                                                                        <.-MRTBL>/4
```

THE PERSON

MRP -

```
MACRO M1110 27-MAR-80 15:11 PAGE 7-1
CORL F. Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
ALUCKE = 040000
ALUOE = 004000
AT1 = ********* GX-
                                   BYTE4 = 000004
BYTE40 = 000050
                                                                        BYTE91=-000133
BYTE92=-000134
                                                                                                           MREN2 + : 020000
MRNUM - = : 000012
                                                                                                                                               Q$NCLK=-176000
                                                                                                                                         Q$PP = 000100
002 Q$PPSW= 000320 ™.
                                    BYTE41=-000051
                                                                        BYTE93 = . 000135
                                                                                                                       000050RG
                                                                                                                       000130RG.
AØ1
         - 010000
                                    BYTE42=-000052
                                                                        BYTE94= 000136
                                                                                                           MRPXX:
                                                                                                                                         002 Q$PP2 = 000300
                                                                                                                                        002, Q$PHZ = 000300

002, Q$QHL = 000013

Q$QL = 000053

Q$QLA = 000053

Q$QLR = 000001

Q$QLR = 000001
                                                                        BYTE95= 000137
                                                                                                           MRTBL --- 000000R
MSYN = 000040
BASE
        = · ***** GX ·
                                    BYTE43 = . 000053
                                                                        BYTE96 = . 000140
ÐITVAL=:000000
                                    BYTE44= 000054
                                                                                                                    = 000144
                                    BYTE45= 000055
                                                                        BYTE97 = . 000141
       = 0000001
BITO
                                    BYTE46= 000056
BYTE47= 000057
BYTE48= 000060
                                                                                                           ÖF1
                                                                        BYTE98= 000142
BITI
                                                                                                                   _=_жжжжжж GX
                                                                        BYTE99= 000143
BYTVAL = 000144
        = · 002000
= · 004000
                                                                                                                   = 000010
= 000020
BIT10
                                                                                                           PLB.
BIT11
                                                                                                           PLC:
                                    BYTE49= 000061
BYTE5 = 000005
                                                                        CBKALL = . 001000
                                                                                                           PLD
                                                                                                                    - 000030
                                                                                                                                               Q$RDCD= 000005
                                                                        CBKCLK=-000400
                                                                                                           PLRWR:=:000200
PLR:EN=:000200
PR1 =:*********** GX:
BIT13
        = 020000
                                                                                                                                               Q$RDMD=-000006
                                    BYTE50= 0000062
                                                                                                                                               Q$REBK = . 001000
Q$RNC . = . 006000
Q$RSC . = . 004000
BIT14
         = 040000
                                                                                 = · ******* GX
                                                                        CL 1
                                    BYTE51= 0000063
BYTE52= 000064
BYTE53= 000065
BIT15
                                                                        CHOBRE = 100000
                                                                        COMXX = ******* GX-
CPCCEN=**010000
                                                                                                           QR$CR1= 176420
BIT2
         = 000004
         = 000010
                                                                                                           QR$CR2= 176422
QR$LBR= 176424
                                                                                                                                               Q$RSET=-000010
Q$SM =-100000
Q$SP =-000120
BIT3
         = - 000020
                                    BYTE54= 000066
                                                                        CPREAD = . 040000
BIT4
         = · 000040
= · 000100
= · 000200
                                    BYTE55=-0000067
BYTE56=-000070
BYTE57=-000071
8 I T 5
                                                                        CPWRTE = . 020000
                                                                                                           Q$ATTN= 000100
                                                                                                           Q$BCL -= .000001
Q$CCCP= .000040
                                                                                                                                               0$SP2 = 000340
RE1 = ****** GX
BIT6
                                                                        CSADRD = - 000004
                                                                        CSEQCI = 100000
BIT7
                                    BYTE58= 000072
BITS
                                                                        CSOE - 000040
                                                                                                           Q$CHB · = · 000400
                                                                                                                                               RGQ.EN= 000200
                                    BYTE59=-000073
BYTE6 =-000006
BYTE60=-000074
                                                                                                           Q$CHRL= 000200;
Q$CLR = 000040
BIT9
         --001000
                                                                        CSWRTE=-000100
                                                                                                                                               RGQ.VA= 020000
                                                                        DBR.RD= 000001
DB$CPP= 001457
BREAK . = . ****** GX
                                                                                                                                                       RS1
BYTE0 = 000000
BYTE1 = 000001
                                                                                                           Q$CNC -- 030000
Q$CP -- 000060
                                                                                                                                                                     GX:
                                                                                                                                               SCAN
                                    BYTE61= 000075
                                                                        DB$SPT= 000026
                                                                                                                                               SEQ.CI= 000010
BYTE10= 000012
                                    BYTE62= 000076
                                                                        DB$TPC=-000023
                                                                                                            Q$CPCC=-000010
                                                                                                                                                       = · *******
                                                                                                                                               SS 1
BYTE11= 000013
                                    BYTE63=-000077
                                                                        DISPGS = 100000
DMAAWR = 000005
                                                                                                           Q$CP2·=·000260
Q$CSC·=·010000
                                                                                                                                               ST1
                                                                                                                                                        # √yokokokok =
BYTE12= 000014
                                    BYTE64= 000100
                                                                                                                                               S$CLR :: 0000000
BYTE13= 000015
                                    BYTE65= 000101
                                                                                                                                               S$LA = 000001
                                                                        DMARRD = - 000003
                                                                                                            Q$CSEL = . 000360
BYTE14= 000016
                                    BYTE66=-000102
                                                                        DMARWR = - 000004
                                                                                                            Q$CSET= .000002
                                                                                                                                                S$QB
                                                                                                                                                        = 0000005
                                    BYTE67 = . 000103
BYTE15=-000017
                                                                        ENBR - - 010000
                                                                                                            Q$CSP·=·020000
BYTE16= 000020
BYTE17= 000021
                                    BYTE68=-000104
                                                                        ERR12 -- ***** GX
                                                                                                           Q$DMA - = - 000001
                                                                                                                                                S$QX
                                                                                                                                                        = 000004
                                    BYTE69= 000105
BYTE7 = 000007
                                                                        ERR4 = ******* GX
ERR8 = ******** GX
                                                                                                           Q$ENBK = . 040000
                                                                                                                                               S$SR
                                                                                                                                                        = 0000007
BYTE18=-000022
                                                                                                           Q$ENOP = . 020000
                                                                                                                                                9$94
                                                                                                                                                        - 000010
 BYTE19=:000023
                                    BYTE70= 000106
                                                                                =- ******* GX
                                                                                                            Q$FAL - = - 004000
                                                                                                                                                S$S2
                                                                        FIND.
                                                                                                                                                        = 0000014
BYTE2 - - 000002
                                    BYTE71= 000107
                                                                        GCMBLK = ******* GX-
GCONLY = ****** GX-
GO1 = ******* GX-
                                                                                                            Q$FC - 000045
                                                                                                                                                TD$CTR=-176370
                                    BYTE72=-000110
BYTE73=-000111
BYTE20= 0000024
                                                                                                           Q$FO.
                                                                                                                    = · 000044
= · 000046
                                                                                                                                                TD$CTW= 176360
 BYTE21= 000025
                                                                                                                                                TD$INL = . 004000
                                     BYTE74= 000112
 BYTE22= 0000026
                                                                        G.DPRM= ******** GX
                                                                                                            Q$HBF·=·000002
                                                                                                                                                TD$MEM= 000270
                                                                                                            Q$ICP-=-000006 ---
Q$IHB-=-000003
                                    BYTE75= 000113
BYTE76= 000114
                                                                                 = жжжжжжж БХ
 BYTE23= 0000027
                                                                        LD1
                                                                                                                                                JD$OAR= 176344
                                                                        LOC.EN= 000100
 BYTE24= 000030
                                                                                                                                                TD$0TR= 176346
 BYTE25= 000031
                                    BYTE77= 000115
                                                                        LOC.WA = 040000
                                                                                                            Q$IHRL= .000002
                                                                                                                                                TD$QRD=-000274
                                                                        LOC.WB= 100000
MAREN1= 000001
MAREN2= 004000
                                                                                                            Q$IMRP=.000007
Q$LBD.=.001000
Q$LBDP=.001001
                                                                                                                                                TD$SW-=-176376
TD$TAR=-176372
 BYTE26=-000032
                                    BYTE78=:000116
 BYTE27 = - 000033
                                    BYTE79= 000117
BYTE8 = 000010
 BYTE28= 000034
                                                                                                                                                TD$TAW≕-176362
                                    BYTE80= 000120
BYTE81= 000121
BYTE82= 000122
                                                                                                            Q$LBP. = 000001
Q$LDCD= 000003
Q$LDMD= 000004
BYTE29 - 0000035
BYTE3 - 000003
                                                                        MARLOD = 010000
MAROUT = 000002
                                                                                                                                                TD$TDR=-
                                                                                                                                                            176374
                                                                                                                                                TD$TDW=-176364
 BYTE30= 000036
                                                                        MAR.LO= 002000
                                                                                                                                                       = 000020
                                                                                                                                                T$AD
 BYTE31= 000037
                                     BYTE83 = - 000123
                                                                        MAR.OU= 000040
                                                                                                            Q$LDPP=:002000
                                                                                                            Q$LHP = 010000
Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
BYTE32= 000040
BYTE33= 000041
                                                                        MBKALL= 001000
MBKCLK= 000400
                                     BYTE84=-000124
                                                                                                                                                T$BD
                                     BYTE85= 000125
                                                                                                                                                        100000 <u>- 1</u>00000 = 000020
                                                                                                                                                 SBSO.
                                    BYTE86= 000126
                                                                        MMADRD= 000100
 BYTE34= 000042
                                                                                                                                                T#RT
                                                                        MMLEFT= 0000002
MMOE = 000004
 BYTE35= 000043
                                    BYTE87 = . 000127
                                                                                                                                                T$BTAR= 000030
T$BTD<sup>7</sup>=7002000
T$CD = 000100
 BYTE36= 000044
                                    BYTE88= 000130
                                                                                                            O$MRBQ=,0000240
U$MSC = 040000
                                                                        MMWRTE = 000010
BYTE37 = : 000045
                                    BYTE89=-000131
                                                                        MMWR (E = 100000
MNOBRE = 100000
MRFN1 = 000001
                                                                                                            Q$MSET= 000004
BYTE38= 000046
                                    BYTE9 = 000011
                                                                                                                                                T$CLK - - 002000
                                                 000132 MREN1 = 000001
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BYTE39= 000047
                                                                                                  ูด$MSP - = ∙ โต้ติติติติ
§IA-RDP85-00514R000200020001-3
                                                                                                                                                T$DISK= 000200
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All the second
                 0 M1110 27-MAR-80 15:11 PAGE 7-2
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MRP -- M
SYMBOL - TA
T$DRD - = - 000004
                                    T$UBUS= · 100000
                                                                        WORD3 = 000006
                                                                                                           WORD54=.000154
                                                                                                                                               WORD79= 000200
T$EMEM= 010000
                                    T$1CLK=-000400
                                                                        WORD30=-000074
WORD31=-000076
                                                                                                           WORD55= 000156
WORD56= 000160 _
                                                                                                                                               WORD8 = 000020
WORD80='000240
T$FSAA= 000000
                                    T$8BEN= ∙000020
T$F$AB= : 000004
                                    UBD: IN= 000020
                                                                        WORD32= 000100
                                                                                                           WORD57=-000162
                                                                                                                                               WORD81 = 000242
T$FSAC= 000014
                                   WORD0 = 000000
WORD1 = 000002
                                                                        WORD33=-000102
                                                                                                           WORD58= 000164
                                                                                                                                               WORD82= 000244
T$FSB2=-000010
                                                                        WORD34= 000104
                                                                                                           WORD59= 000166
T$IBAR = .000024
T$IBAR = .000024
T$IBE = .020000
T$IBF = .040000
T$ICD = .000040
                                                                                                                                               WORD83= 000246
                                    WORD10= 000024
                                                                        WORD35= 000106
                                                                                                           WORD6 = 000014
                                   WORD11= 000026
WORD12= 000030
WORD13= 000032
                                                                        WORD35=-000106
WORD36=-000110
WORD37=-000112
                                                                                                                                               WORD84= 000250
                                                                                                            WORD60= 000170
                                                                                                                                               WORD85= 000252
                                                                                                           WORD61= 000172
WORD62= 000174
                                                                                                                                               WORD85= 000254
WORD87= 000256
                                                                        WORD38 - 000114
WORD39 - 000116
                                    WORD14= 000034
WORD15= 000036
T$MODE = 004000
T$OB = 004000
T$OB = 004000
T$OBE = 004000
                                                                                                            WORD63=
                                                                                                                       000176
                                                                                                                                               WORD88= 000260
                                                                        WORD4 = 000010
                                                                                                           WORD64= 000200
                                                                                                                                               WORD89= 000262
WORD9 = 000022
                                    WORD16= 000040
                                                                        WORD40= 000120
WORD41= 000122
                                                                                                           WORD65=.000202
                                    WORD17=-000042
                                                                                                           WORD66=-000204
                                                                                                                                               WORD90= 0000264
T$08F · = · 010000
                                    WORD18= 000044
                                                                        WORD42= 000124
                                                                                                                                              WORD91=-000266
WORD92=-000270
WORD93=-000272
                                                                                                           WORD67= 000206
WORD68= 000210
                                    WORD19=-000046
WORD19=-0000046
WORD2-=-0000004
T$0BRA= 000034
                                                                        WORD43 = 000126
                                                                                                          WURD68 - 000210

WORD69 - 000016

WURD70 - 000016

WURD70 - 000214

WORD71 - 000216

WURD72 - 000220

WURD73 - 000222
T$0BWA= 000032
                                                                        WORD44= 000130
T$0UTA=-100000
                                    WORD20=-000050
                                                                        WORD45= 000132
                                                                                                                                               WORD94= 000274
T$RBDO= 000200
T$RNB = 000040
T$RSET= 040000
                                   WORD21 = 000052
WORD22 = 000054
                                                                        WORD46 = 000134
                                                                                                                                               WORD95= 000276
                                                                        WORD47= 000136
                                                                                                                                               WORD96= 000300
                                    WORD23= 000056
                                                                        WORD48= 000140
                                                                                                                                               WORD97= 000302
T$SC. = 000022
T$SCLK= 020000
                                    WORD24= 000060
                                                                       WORD49= 000142
WORD5 = 000012
                                                                                                                                              WORD98= 000304
WORD99= 000306
                                    WORD25=-000062
                                                                                                           WORD74= 000224
T$SEG1 = . 000000
                                   WORD26= 000064
WORD27= 000066
                                                                        WORD50= 000144
                                                                                                           WORD75=-000226
WORD76=-000230
WORD77=-000232
                                                                                                                                               WRDVAL = . 000310
T$SEG2=-000001
                                                                        WORD51= 000146
                                                                                                                                               XTREAD=:001000
T$SEG3=-000002
                                    WORD28 - 000070
                                                                       WORD52= 000150
WORD53= 000152
                                                                                                                                               XTWRTE = 000400
T$SO· = 0000001
                                    WORD29= 000072
                                                                                                           WORD78= 000234
                                                                                                                                    . ABS.
            000000
                            000
            000000
                            001
MRP
           000226
                            002
ERRORS DETECTED:
                          Ø
VIRTUAL MEMORY USED: 3151 WORDS (+13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:41
mRP,MRP/-SP=[20,1]IM,[20,1]MRP
```

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0 M1110 27-MAR-80 15 Approved For Release 2005/07/12 LIA-RDP85-00514R000200020001-3
MRLD - · ·
                                                                  .TITLE - MRLD
.PSECT - MRLD
          000000
        234567
                                                                 HARDWARE OUERY RESOLVER "MANUAL" DEBUGGING AIDS MATCH REPORT PROCESSOR ROUTINES
                                                                  COMMANDS:
        8
                                                                            LOAD MRP MEMORIES
       10
                                                                  ONCE A: COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE MRP AT LOCATION
       11
12
       15
16
17
                                                                  .MCALL · WTSE$S,RDAF$S,CLEF$S
        18
19
                                                                  TABLE OF VALID MRP MEMORY MNEMONICS AND ADDRESSES OF
                                                                  ASSOCIATED ROUTINES
       26
21
22
                                                       LDITBL::
           000000
        23
24
25
26
                                                                                                              :LOAD - MICROPGM - MEMORY -
                                                                   .ASCII:
                                                                             /MM/
            000000
                           115
                                      115
                                                                  .WORD
                                                                             LD IMM.
            000002
                       0002624
                                                                                                              :LOAD DATA MEMORY AND TOTABLES)
                           115
                                      104
                                                                             /MD/
            000004
                                                                             LDIMD.
                       0004241
                                                                   .WORD
            000006
                                                                             <.-LD1TBL>/4
        27
28
29
31
32
33
34
35
                       000002
                                                       LD1LH
                                                                  LOAD:
                                                                  PARSE THE ** MM*
        36
37
                                                        LD1::
            000010
                                                                                                               :LOCATE MEMORY MNEMONIC IN COMMAND LINE
                                                                             FIHD
                                                                   CALL
            000010
                                                                                                              :OK, CONTINUE:
; MISSING OPERAND:
                                                                   BCC
        39
            000014
                       103004
                                                                   CALL:
                                                                             ERR4
        40
            000016
        41
            000022
                       000167
                                  000644
                                                                   JMP ·
                                                                             LD4X
        42
                                                        ż
                                                                   MATCH - MNEMONIC - IN - COMMAND - LINE - AGAINST - TABLE - OF - VALID - MNEMONICS
        43
44
                                                                              #LD1LN,R0
                                                                                                               ; NUMBER OF TABLE ENTRIES
                                                                   MOV
                       012700
         45
                                  000002
                                                        1$:
            000026
                                                                                                               ;POINT TO TABLE :
:MATCH AGAINST COMMAND LINE
                                                                   MOV.
                                                                              #LD1TBL,R2
             000032
                       012702
                                  000000'
                                                                   CALL
                                                                              SCAN
         47
            000036
                                                                                                               ; MATCH WAS MADE
                                                                   BCC
                                                                              2$
                       103004
         48
            000042
                                                                              ERR7
                                                                                                               ; * INVALID - MEMORY - MNEMONIC *
        49
50
51
52
                                                                   CALL
             000044
                       000167
                                  000616
             000050
                                                                   SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MINEMONIC SCAN THE REMAINDER OF THE COMMAND INFERROR CONTROL
                                                                   SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL THEORMATION:
        53
54
55
                                                                   1. START ADDRESS ONLY, REPEAT PROMPT FOR EACH MEMORY LOCATION FROM THE START ADDRESS FORWARD, NB, END OF MEMORY (AS DETECTED BY THE QMAIN SUBROUTINE PDATA) OR A <CR > RESPONSE TO THE ROMPT
         56
         57
                                             Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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MRLD-.. MACRO.M1110 27-MAR-80 15:10 PAGE.5-1
                                                Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                                           WILL-TERMINATE-THE-LOAD.
       59
                                                                          MR>LD · MD · Ø
                                                                          START-ADDRESS, LOOP INDICATOR, LOOP-ON-THE-LOADING-OF-THIS-ONE-MEMORY-LOCATION-ONLY.
       60
       61
62
                                                                          START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE PROMPT AND FILL MEMORY (BETWEEN START AND END ADDRESSES)
       64
65
                                                                          START-ADDRESS, END-ADDRESS, LOOP-INDICATOR, ISSUE ONLY-O
PROMPT-AND-LOOP-ON-THE-LOADING-OF-MEMORY-(BETWEEN START-
AND-END-ADDRESSES) WITH-THIS-VALUE.
MR>LD-MD-0 7 L-
       66
                                                                                                                                          ISSUE ONLY ONE
      69
70
       72
73
           000054
                       010167
                                  000000G
                                                          2$:
                                                                      MOV-
                                                                                  R1.RTHPT
                                                                                                                     :SAVE POINTER:
:LOCATE START ADDRESS IN COMMAND LINE
           000060
                                                                      CALL
                                                                                  FIND
           000064
                       103004
                                                                      BCC.
                                                                                  3$
                                                                                                                     ;OK, CONTINUE
       76
           000066
                                                                                  ERR4
                                                                      CALL
       77
           000072
                       000167
                                  000574
                                                                      JMP
                                                                                  LDIX
                                                                                                                     ;EXIT
;CONVERT,COMMAND LINE VALUE TO BINARY
;CONVERGION;SUCCESSFUL
       78
           000076
                                                          3$:
                                                                      CALL
                                                                                  PACK
           000102
                       103004
                                                                      BCC.
                                                                                  4$
       80
           000104
                                                                      CALL
                                                                                  ERRS
                                                                                                                     ; "INVALID NUMERIC VALUE"
       Αi
           000110
                       000167
                                   000556
                                                                      JMP
                                                                                 LD4X
       82
       83
           000114
                       016767
                                   000000G 000000G 4$:
                                                                                 BINWD,MSTRT.
BINWD,MSTR2.
#-1,MEND.
                                                                      MOV
                                                                                                                     SAVE LOADING START ADDRESS TO THE SAVE IT TWICE (FOR REFRESHION LOOP)
       84
           000122
000130
                       016767
                                   000000G · 000000G
                                                                      MOV.
       85
                       012767
                                   1777777
                                              000000G
                                                                                                                     ; INIT END ADDRESS
                                                                     START ADDRESS HAS BEEN FUND CAN FUR END ADDRESS OR LOOP INDICATOR (CONDITIONS 27 3 2000 ). IF THERE IS NOTHING FURTHER IN THE CONTAINS (1985) CONDITION 1 IS IN EFFECT.
       87
       88
       89
       90
       9 i
           000136
                                                                      CALL
                                                                                 FIND
                                                                                                                     :SCAN - COMMAND - LINE
       92
           000142
                       103004
                                                                      BCC BIS
                                                                                                                     SOMETHING THERE:
SOMETHING THERE:
SIGNAL TO REPEAT PROMPT:
JUMP TO RTN:
                                                                                  54
                       ð52767
                                                                                 #RP,BASE
       93
           999144
                                   000000G · 000000G
           000152
                       000437
                                                                                   9$
       95
       96
           000154
                       122711
                                   000114
                                                                      CMPB
                                                                                 #*L,(R1)
                                                                                                                     ;LOOP · INDICATOR
       97
           000160
                       001006
                                                                      BNE -
                                                                                                                     :NO. MUST BE UPPER ADDRESS:
:SET END ADDR = START ADDR:
:HOW TO STOP LOOP
                                                                                 6$
           000162
000170
       98
                       016767
                                  000000G · 000000G
                                                                      MOV.
                                                                                 MSTRT, MEND
       99
                                                                      CALL
                                                                                  HANG
      100
           000174
                       000426
                                                                                                                     JUMPATO RINA
                                                                      BR
                                                                                 9$
      101
                                                                                                                    ONVERT UPPER ADDRESS
ON CONTINUE
INVALID NUMERIC
      102-000176
                                                          6$:
                                                                      CALL
                                                                                  PACK
      103
           000202
                       103004
                                                                      BCC.
CALL
                                                                                  7$
      104 000204
                                                                                 ERR5
      105
           000210
                       000167
                                  000456
                                                                                 LDIX
                                                                                                                     :EXIT
      106
                                                                      SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS_(CONDITION-4)
      188
      109
      110
                                                                                 BINWD, MEND SET UP END ADDRESS
FIND CHECK, FOR LOOP INDICATOR
# L. (R) CORRECT INDICATOR
           000214
                       016767
                                  000000G 000000G 75:
                                                                      MOV.
     111 000222
112 000226
                                                                      CALL:
                       193411
     113
          000230
                       122711
                                  000114
                                                                      CMPB
     114
          000234
                       001404
                                               Approved For Release 2005/07/12
                                                                                            ■CIA-RDP85-00514R00020002000123
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MRLD--- M 0-M1110 27-MAR-80 15:10 PAGE-5-2-
                                                                         Approved For Release 2005/07/12 IA-RDP85-00514R0002000200048
         115 000236
                                                                                                            CALL
                                                                                                                              ERR11
                                                                                                                                                                 :LOOP · OPTION · ERROR
         116 000242
                                   000167
                                                                                                            JMP.
                                                                                                                              LD1X
         117 000246
                                                                                          8$:
                                                                                                            CALL
                                                                                                                              HANG
                                                                                                                                                                                    :HOW-TO-STOP-LOOP
         118
         119 000252
                                   016701 000000G
                                                                                                           MOV-
                                                                                          9$:
                                                                                                                              RTHPT,R1
                                                                                                                                                                                   :POINT-TO-ROUTINE
                                                                                                                                                                          JUMP TO ROUTINE
         120 000256
                                   000171
                                                     000000
                                                                                                                              @(R1)
         121
         122
         123
                                                                                                           LOAD MICROPGM MEMORY
         124
                 000262
000262
                                                                                                                              MMHIGH,-(SP)
         125
                                                                                          ĹD:MM::
                                   016746
                                                     000000G
                                                                                                                                                                                   :SUPPLY-UPPER∵MEMORY'UIMIT-
:LOWER-LIMIT-
:PREPARE-TO-LOAD-
                                                                                                           MOV:
         127
                 000266
                                   016746
                                                      000000G
                                                                                                           MOV.
                                                                                                                              MMLOW,-(SP)
         128
                .000272
                                                                                                            CALL
                                                                                                                              BUFS2
         129
                 000276
                                    103002
                                                                                                           BCC
                                                                                                                              100$
                                                                                                                                                                                   :NO ERRORS, CONTINUE
         130
131
                 000300
                                   000167
                                                                                                            JMP
                                                                                                                              LD1X
                 000304
                                   032767
                                                     000000G-000000G-100$:
                                                                                                                                                                                   :REPEAT-PROMPT-
:NO. ONCE-ONLY-
                                                                                                           BIT.
                                                                                                                              #RP,BASE
         133
                 000312
                                   001416
                                                                                                           BEO.
                                                                                                                              2$
         134
                 000314
000320
                                                                                                                             PDATA.
                                                                                                            CALL
                                                                                                                                                                                    READ DATA FROM COMMAND LINE
         135
                                    103002
                                                                                                            BCC
                                                                                                                                                                                   :NOT END OF MEMORY
:IF END, EXIT
:<CR> RESPONSE
                                                                                                                              10$
                 000322
         136
                                   000167
                                                     000344.
                                                                                                            IMP.
                                                                                                                             LD1X
                                                                                                           BV1:
JMP:
         137
                 000326
                                    102002
                                                                                         10$:
                                                                                                                             204
         138
                 000330
                                   000167
                                                     000336
                                                                                                                             LD4X
                                                                                                                                                                                    :YES, EXIT
                 000334
                                                                                         20$:
                                                                                                            CALL
                                                                                                                             LOADMM.
                                                                                                                                                                                   :LOAD·MICRO·MEMORY·
:BUMP·TO·NEXT·ADDRESS·
         140
                 000340
                                   066767
                                                    000000G · 000000G
                                                                                                           ADD -
                                                                                                                              INCVAL, MSTR2
         141
                 000346
                                   000762
                                                                                                                                                                                    :REPEAT
         142
                                                                                                           PROMPT ONCE . THEN . FILL . MEMORY .
         144
                 000350
000354
         145
                                                                                         2$:
                                                                                                           GALL.
                                                                                                                             PDATA:
                                                                                                                                                                                    :NOT END OF MEMORY OR ERROR
                                                                                                                                                                                    :PROMPT
         146
                                   103002
                                                                                                           BCC.
                                                                                                                             30$
         147
                 000356
                                                    000310
                                   000167
                                                                                                            JMP.
                                                                                                                             LD4X
         148
         149
                 000362
                                                                                                           CALL
                                                                                         30$:
                                                                                                                             LOADMM.
                                                                                                                                                                                   :LOAD · MICRO · MEMORY ·
         150
                000366
                                   066767
                                                     000000G · 000000G ·
                                                                                                                             INCVAL, MSTR2
MSTR2, MEND
                                                                                                           ADD.
                                                                                                                                                                                   : ADVANCE - ADDRESS -
         151
                000374
                                   026767
101767
                                                     000000G - 000000G
                                                                                                           CMP
                                                                                                                                                                                   ;HAS UPPER MEMORY LIMIT BEEN REACHED;
;NO, CONTINUE;
;LOOP ON
                 000402
                                                                                                           BLOS
         153
                 000404
                                   032767
                                                    000000G-000000G-
                                                                                                                             #LOOP, BASE
                                                                                                           BIT.
                                   001527
016767
000757
         154 000412
155 000414
                                                                                                           BEQ.
                                                                                                                                                                                    :NO. EXIT.
                                                                                                                             LD1X
                                                     000000G-000000G
                                                                                                                             MSTRT, MSTR2
                                                                                                                                                                                   :REINITIALIZE - ADDRESS
                 000422
         157
         158
         159
                                                                                                           LOAD · DATA · MEMORY ·
         160
         161 000424
                                                                                         LDIMD::
         162.000424
                                   016746
                                                    000000G
                                                                                                                             MDHIGH,-(SP)
MDLOW,-(SP)
                                                                                                           MOV
                                                                                                                                                                                   ;SUPPLY-UPPER-MEMORY LIMIT.
         163 000430
                                                                                                                                                                                   :LOWER · LIMIT · :PREPARE · FOR · LOAD / ;
                                   016746
                                                     000000G
                                                                                                           MOV.
                 000434
                                                                                                           CALL
BCS
                                                                                                                             BUFSET.
                                                                                                                                                                                   :ERROR:
         165 000440
                                   103514
                                                                                                                             LD4X
         166
        167
                 000442
                                   012746
                                                    000377
                                                                                                           MOV.
                                                                                                                             #377,-(SP)
                                                                                                                                                                                   :SET-MRP-MICRO-ADDRESS. + X:FF: (JUMP-SELF)
        168 000446
                                                                                                           CALL:
                                                                                                                             SEQMM-
        169
        170 000452 005046
                                                                                                           CLR.
                                                                                                                                                                                   :REINHIBIT BRANCH-CONTROL-REG
                000454
                                                                                                           CALL.
                                                                                                                             MERCE
                                                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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MRLD MACRO M1110 27-MAR-80 15:10 PAGE 5-3
Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     172-000460
                   005046
                                                          CLR -
                                                                    -(SP)
     173 000462
                                                          CALL
                                                                    LBMRP
                                                                                                 SINGLE CLOCK TO REINHIBIT BRONCH REGISTER
         000466
     175
                   005046
                                                          OLR:
                                                                    -(SP)
                                                                                                 :START-MICROCODE AT 0
     176
         000470
                                                          CALL
                                                                    SECOS
     177
         000474
                   005046
                                                          CLR.
                                                                    -(SP)
                                                                                                 REINHIBIT BRANCH CONTROL REG
     179 000476
                                                                    CPCR
-(SP)
                                                          CALL.
     180 000502
                   005046
                                                          ČLR.
     181
         000504
                                                          CALL
                                                                    LBCP
                                                                                                 :SINGLE:CLOCK:TO:REINHIBIT:BRANCH:REGISTER
     183
         000510
                             001000
                                       176422
                                                          MOV.
                                                                                                 ;RE-ARM.INTERRUPTS
                                                                    #Q$REBK,QR$CR2
     184
                   012767
012746
         000516
                             120000
                                                          MOV
                                       176422
                                                                    #<Q$SM+Q$ENOP>,QR$CR2
                                                                                                 SET SEARCH MODE + ENABLE INTERRUPTS
         000524
                             000360
                                                          MOV-
                                                                    #Q$CSEL,-(SP)
                                                                                                 CLEAR ALL SELECTIONS:
CLEAR DRIVE AND PULSE:
CLEAR CP:NO-CLOCK
     186
         000530
                   052716
                             001001
                                                          BIS.
                                                                    #<Q$LBD+Q$LBP>,(SP)
     187
         000534
                   852716
                             170000
                                                                    #<Q$MNC+Q$CNC>,(SP)
         000540
                   005046
                                                          CLR
                                                                     (SP)
                                                                                                 :SET-NOTHING
     189
         000542
                                                          CALL
                                                                    CSR1
     190
     191
         000546
                   032767
                             000000G-000000G
                                                          BIT.
                                                                    #RP, BASE
                                                                                                 REPEAT PROMPT:
     192
         000554
                   001412
                                                          BEQ.
                                                                    2$
     193
         000556
                                                                                                 READ DATA FROM COMMAND LINE
EXIT ON END OF MEMORY OR ERROR
                                                 1::
                                                          CALL
                                                                    PDATA:
     194
         000562
                   103434
                                                          BCS -
                                                                    LDMDX:
     195
         000564
                   102433
                                                                                                 : < CR > RESPONSE TO PROMPT
         000566
                                                          CALL
                                                                    LOADMD .
                                                                                                 :LOAD MRP DATA MEMORY
:BUMP ADDRESS
     197
         000572
                   066767
                             000000G-000000G-
                                                          ADD:
                                                                    INCVAL, MSTR2
     198
         000600
                   000766
                                                                    1$
                                                                                                 :REPEAT
     199
    200
                                                          PROMPT ONCE THEM FILL MEMORY
    201
    202 000602
                                                          GALL -
                                                                    PDATA:
                                                                                                 PROMPT
    203
         000606
                   103422
                                                          BCS
                                                                                                 :END-OF MEMORY OR ERROR
:<CR> RESPONSE
:LOAD DATA MEMORY
:ADVANCE ADDRESS
                                                                    LDMDX
     204
         000610
                   102421
                                                          BVS
    285
         000612
                                                          CALL
                                                                    LOADMD .
    206 000616
                   066767
                             000000G · 000000G
                                                                    INCVAL, MSTR2
                                                          ADD
     207
         000624
                   026767
                             000000G-000000G
                                                          CMP
                                                                    MSTR2, MEND
                                                                                                 :HAS UPPER MEMORY LIMIT BEEN REACHED:
:NO. CONTINUE
:LOOP ON
     208
         000632
                   101767
                                                          BLOS
                                                                    3$
                                                                    #LOOP,BASE
    209
         000634
                   032767
                             000000G-000000G
                                                          BIT.
    210
         000642
                   001404
                                                                    LDMDX-
                                                                                                 EXIT
REINITIALIZE ADDRESS
    211 000644
212 000652
213
                   016767
                             000000G-000000G-
                                                          MOV
                                                                    MSTRT, MSTR2
                   000757
                                                          BR
                                                                    3事
    214 000654
                   005046
                                                          CLR ·
                                                LDMDX:
                                                                    -(SP)
                                                                                                 :CLEAR·NOTHING·IN·CSR1
:SET·NO-CLOCKS·
    215 000656
216 000662
                   012746
                             176000
                                                                    #Q$NCLK,-(SP)
                                                          CALL
                                                                    CSR1
    217
218
         000666
                   005067
                             176422
                                                          CLR
                                                                                                 ; SET.LOAD.MODE.
    219
    220
         000672
                                                LD1X:
         000672
    221
                   042767
                            000000G · 000000G
                                                                                                 :CLEAR PROMPT FLAG:
;KILL AST (IF THERE WAS ONE)
                                                          BIC.
                                                                    #RP.BASE
    222.000700
                                                          CALL
                                                                    KILL
    223 000704
                   000167
                            000000G
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0 M1110 27-MAR-80 15:10 PAGE 6 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 MRLD ... 225 226 227 228 229 230 000710 231 000710 232 000714 233 000720 LOAD MRP MICROPGM MEMORY. LOADMM: 016746 000000G MOV. ;SEND CURRENT ADDRESS MSTR2,-(SP) CALL -:SEQUENCE · UP · TO · START · ADDR · SEOMM. 012746 000012 MOV. #<MMWRTEN+MMLEFT>,-(SP) 234 235 236 000724 000730 CALL MRPCRA. DIRECT CNTL WORD TO MRP : MOVE DATA WORD TO LOD BUS REG SEND DATA WORD TO MRP 016746 000000G MOV-DATA1.-(SP) 000734 CALL LBMSC NS 238 000740 016746 000000G MSTR2,-(SP) MOV. :SEND CURRENT ADDRESS 239 240 000744 000750 000754 CALL MOV-SEQMM :SEQUENCE-UP-TO-START-ADDRESS 012746 000010 #<MMWRTEN>,-(SP) 241 CALL MRPCRA. :DIRECT-CNTL-WORD-TO:T作户 242.000760 016746 **BRARRAG** MOV DATA2,-(SP) :MOVE-DATA WORD TO 120D BUS REG :SEND-DATA WORD TO MRP 243 244 000764 CALL LBMSC -NS 000770 000772 000776 245 246 005046 CLR--(SP) CALL . MRPCR: ; CLEAR.THE.MRP.CR.BITS NS 247 005046 CLR. -(SP) 248 001000 LBMRP -; ISSUE · CLOCK · TO · REINHIBIT · BR 249 001004 RETURN.

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MRLD- - MACRO M1110 27-MAR-80 15:10 PAGE 7
                                    Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    251
252
253
                                                     LOAD MRP DATA MEMORY
    254
    255
    256 001006
257 001006
                                            LOADMD:
                 012767
012767
        001006
                          000004
                                    176424
                                                     MOV-
                                                              #Ost DMD, ORSLAR
                                                                                         :MOVE ATTN CODE TO LOD BUS REG
        001014
                                                              #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.;SET.ATTN.CODE.READY
QR$CR2.R1 ;READ.CSR2
                           120100
                                   176422
                                                     MOV:
    259 001022
                 016701
                           176422
                                            1$:
                                                      MOV.
    260 001026
                 032701
                          000100
                                                      BIT
                                                              #Q$ATTN,R1
                                                                                         :ATTN : CLEAR
    261 001032
                 001373
                                                                                         ;NO, READ-AGAIN-
    263 001034
                 016767
                           000000G-176424
                                                                                         :CD MEMORY START—ADDRESS以前的表示。
                                                     MOV
                                                              MSTR2,QR$LBR
    264 001042
                 012767
                           120040
                                   176422
                                                     MOV:
                                                              #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET.CC.TO.CP.
        001050
                 016701
                           176422
                                            2$:
                                                     MOV.
                                                              QR$CR2,R1
                                                                                         ;READ CSR2
;IS-CC-TO-CP-CLEAR-
    266
        001054
                 032701
                           000040
                                                     BIT
                                                              #Q$CCCP,R1
    267
        001060
                 001373
                                                     BNF.
                                                              2$
                                                                                         ;NO, READ AGAIN
    268
    269
                 012767
                           000001
                                                              #1,QR$LBR ; TRANSFER COUNT = 1 WORD ; #4Q$CCCP+Q$SM+Q$ENOP>,QR$CR2 ; SET CC TO CP ;
                                   176424
                                                     MOV
    270 001070
271 001076
                 012767
                           120040
                                   176422
                                                     MOV-
                 016701
                           176422
                                                     MOV.
                                                              QR$CR2,R1
                                                                                         ;READ CSR2
    272.001102.
                 032701
                          000040
                                                              #Q$CCCP.R1
                                                                                         : IS - CC - TO - CP - CLEAR -
    273 001106
                 001373
                                                     BNE
                                                                                         :NO. READ-AGAIN-
    274
275 001110
                 012767
                          000000G-176424
                                                     MOV:
                                                              #DATA1, QR$LBR
                                                                                         ;CC.MEMORY DATA BUFFER.
    276
277
        001116
                 012767
                          120040 176422
                                                              #<Q$CCCP+Q$SM+Q$ENOP>.QR$CR2.;SET.CC.TO.CP
    278
279
                                                     WAIT-FOR-INTERRUPT-FROM-CP-
    280 001124
                                                     WTSE$S . #EFN.3
    281
    282.001136
                                                     CLEF$S: #EFN.3
    283
                                                     RE-ARM. INTERRUPTS
    285
    286 001150
287 001156
                 012767
                          100400
                                   176422
                                                     MOV.
                                                              012767
                          101000
                                   176422
                                                     MOV.
    288 001164
289 001172
                 012767
                          160000
                                   176422
                                                     MOV
                                                     RETURN
    290
    291
                 000001
                                                     .END
```

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MRLD- M 0 M1110 27-MAR-80 15:10 PAGE-7-1
SYMBOL TA-RDP85-00514R000200020001-3
ALUCKE = · 040000
                               BYTE39 = . 000047
                                                              BYTE90=-000132
                                                                                            LOC.WB= 100000
ALUOE = 004000
A01 = 010000
BASE = ********* GX
                                                                                                                           O&FC
                                                                                                                                   =·000045
                                                                                            LOOP = ******* GX*
                               BYTF4 = 0000004
                                                              BYTE91= 000133
                                                                                                                           Q$F0
                                                                                                                                   - 999944
                               BYTE40= 0000050
                                                              BYTE92= 000134
                                                                                                                                     000046
                                                              BYTE93 = 000135
                               BYTE41 = . 000051
                                                                                            MAREN2 = : 004000
                                                                                                                           Q$HBF - - 000002
BINUD · = · ********* GX ·
                               BYTE42 = - 000052
                                                              BYTE94= 000136
                                                                                            MARLOD= 010000
                                                                                                                           Q$ICP = 000006
Q$IHB = 000003
BITVAL = - 000000
                               BYTE43= 000053
                                                              BYTE95=-000137
                                                                                            MAROUT = . 000002
BIT0 = 000001
BIT: = 000002
                               BYTE44= -000054
                                                              BYTE96= 000140
                                                                                            MAR.LO= 002000
                                                                                                                           Q$IHRL= 000002
                               BYTE45= 000055
                                                              BYTE97= 000141
                                                                                            MAR.OU- 000040
                                                                                                                           Q$IMRP=.000007
BIT10 = 002000
                                                              BYTE98= 000142
                               BYTE46= 0000056
                                                                                            MBKALL = · 001000
                                                                                                                           Q$LBD·=·001000
BIT11 = 004000
                               BYTE47 = .000057
                                                              BYTE99= 000143
                                                                                            MBKCLK = . 000400
                                                                                                                           Q$LBDP==001001
Q$LBP = 000001
BIT12 -- 010000
                               BYTE48= 000060
                                                              BYTVAL = 000144
CBKALL = 001000
                                                                                            MDHIGH= жжжжжж GX
BIT13 = 020000
                               BYTE49= 000061
                                                                                            MDLOW = ******* GX.
MEND = ******* GX.
                                                                                                                           Q$LDCD= .000003
BIT14 = 040000
                               BYTE5 = 000005
                                                              CBKCLK = . 000400
                                                                                                                           Q$LDMD= . 000004
BIT15 = 100000
                               BYTE50= 000062
                                                              CHOBRE = 100000
                                                                                            MMADRD= 000100
                                                                                                                           Q$LDPP= 002000
BIT2 - 000004
                                                                                                                          Q$LHP. = 010000
Q$MNG = 140000
Q$MR = 000052
Q$MRP = 000040
                               BYTE51 = . 000063
                                                              CPCCEN= 010000
                                                                                            MMHIGH= жжжжжжж GX
                               BYTE52= 000064
                                                              CPCR - ******** GX
                                                                                            MMLEFT= 000002
BIT4
        = 0000020
                               BYTE53 = . 000065
                                                              CPREAD = 040000
                                                                                            MMLOW = · ***** GX · MMOE · = · AAAAAA
        = 999949
BIT5
                               BYTE54= 0000066
                                                              CPWRTE = . 020000
       = 000100
BIT6
                               BYTE55= . 000067
                                                              CSADRD= 000004
                                                                                            MMURTE = . 000010
                                                                                                                           Q$MRP2= 000240
Q$MSC = 040000
Q$MSET= 000004
                               BYTE56 = . 0000070
                                                              CSEQCI = 100000
                                                                                            MNOBRE = 100000
       = - 000400
                               BYTE57= 000071
                                                             CSOE - - 000040
CSR1 = ********* GX-
BIT8 -
                                                                                            MREN1 = 000001
MREN2 = 020000
        = 001000
BIT9
                               BYTE58=-000072
                                                                                                                           Q$MSP - = 100000
                               BYTE59= 000073
BYTE6 = 000006
BUFSET= · ******
                                                                                                                           Q$NCLK= 176000
Q$PP = 000100
                                                              CSWRTE = . 000100
                                                                                            MRPCR -= - ****** GX
BUFS2 = · ******* GX ·
                                                              DATA1 = ****** GX*
DATA2 = ******* GX*
                                                                                            MRPCRA=·***** GX
BYTE0 = 000000
BYTE1 = 000001
                               BYTE60= 000074
                                                                                            MRPXX = ****** GX*
MSTRT = ****** GX*
                                                                                                                           Q$PPSW= 000320
                               BYTE61= 000075
                                                              DBR.RD= 000001
                                                                                                                           Q$PP2.=.000300
Q$QHLT=.000013
BYTE10= 000012
                               BYTE62= 000076
                                                              DB$CPP= 001457
DB$SPT= 000026
                                                                                            MSTR2 - - ****** GX-
BYTE11= 000013
BYTE12= 000014
                               BYTE63= 000077
                                                                                                                           Q$QL = 000043
Q$QLA = 0000053
                                                                                            MSYN - 000040
                               BYTE64= 000100
BYTE65= 000101
                                                              DB$TPC=.000023
                                                                                                    = 000144
BYTE13= 0000015
                                                              DISPGS=-100000
                                                                                            PACK -
                                                                                                                           Q$QLB = 000054
                                                                                                    = · ****** GX
BYTE14= 000016
                               BYTE66= 000102
                                                              DMAAWR= 000005
                                                                                            PDATA = · жжжжжжж GX ·
                                                                                                                           Q$QLR - = - 000001
BYTE15= 000017
BYTE16= 000020
BYTE17= 000021
                               BYTE67=.000103
                                                              DMARRD = . 000003
                                                                                                                           Q$QW = 000042
                                                                                            PLB: =:000010
                               BYTE68= 000104
                                                                                                    = 000010
                                                              DMARUR = . 000004
                                                                                            PLC:
                                                                                                                           Q$RDCD= 000005
                                                              EFN:3 = ******** GX*
ENBR: = *010000
                               BYTE69= 000105
                                                                                            PLD.
                                                                                                    = .000030
                                                                                                                           Q$RDMD= 000006;
BYTE18=-000022
                               BYTE7 = 0000007
                                                                                            PLRWR - - 000200
                                                                                                                           Q$REBK = 001000
BYTE19= 000023
BYTE2 = 000002
                               BYTE70= 000106
                                                              ERR11 = · ******* GX
                                                                                                                           Q$RNC = 001000.
Q$RSC = 004000
                                                                                            PLR.EN= 000200
QR$CR1= 176420
                               BYTE71= 000107
BYTE72= 000110
                                                              ERR4
                                                                    = · ****** GX ·
BYTE20= 0000024
                                                              ERR5
                                                                     = · жжжжжжж GX
                                                                                            QR$CR2=:176422
                                                                                                                           Q$RSET= 000010
Q$SM = 100000
Q$SP = 000120
BYTE21= 0000025
                               BYTE73= 000111
                                                              FRRZ
                                                                     = · ******** GX
                                                                                            QR$LBR= 176424
BYTE22=-000026
                               BYTE74= 000112
                                                              FIND.

⇒ конономик GX

                                                                                            Q$ATTN= .000100
BYTE23=:000027
                               BYTE75= 000113
                                                              HANG -
                                                                     = · ********* GX
                                                                                                                           Q$SP2 - = - 000340
                                                                                            Q$BCL · = · AAAAA1
BYTE24= : 000030
                               BYTE76 = . 000114
                                                                                            Q$CCCP=-000040
                                                              INCVAL = - ********* GX
                                                                                                                           RGQ:EN= 000200
                               BYTE77=:000115
                                                             KILL: =: ******** GX
LBCP: =: ******* GX
BYTE25= .000031
                                                                                            Q$CHB - = - 000400
                                                                                                                           RGQ.VA= 020000
BYTE26= 0000032
                               BYTE78= 000116
                                                                                            Q$CHRL= 000200
                                                                                                                                  = · жжжжжж GX
BYTE27= 0000033
                               BYTE79= 000117
                                                              LBMRP - ********* GX
                                                                                                                           RTNPT · = · *******
                                                                                            Q$CLR - = - 000040
                                                                                                                                             GX.
BYTE28= 000034
                                                              LBMSC = ******* GX
                               BYTE8 = 000010
                                                                                            Q$CNC - = - 030000
                                                                                                                           SCAN
                                                                                                                                 = - жжжжжж GX
BYTE29= 0000035
                               BYTE80 = . 000120
                                                             LDMDX-
                                                                       000654R
                                                                                       002 Q$CP = 000060
                                                                                                                           SEQCS = ******* GX
BYTE3 = 000003
                               BYTE81= 000121
                                                                                       002.Q$CPCC=.000010
                                                             1 D.1
                                                                        000010RG
                                                                                                                           SEQMM-=-****** GX
BYTE30= 000036
                               BYTE82= 000122
                                                              LD1LH - = -
                                                                       000002 G
                                                                                           Q$CP2.=.000260
.Q$CSC.=.010000
                                                                                                                           SEQ.CI= 000010
                                                                                                                           5$CLR = 000000
5$CA = 000001
BYTE31 = - 000037
                               BYTE83=-000123
                                                              LDIMD
                                                                        000424RG
                                                                                       002
BYTE32= 000040
                               BYTE84= 000124
                                                              LD1MM-
                                                                        000262RG
                                                                                       002 · Q$CSEL = · 000360
                                                                                                                           S$LA
S$GB
BYTE33 = . 000041
                               BYTE85 = 000125
                                                                                       002 · Q$CSET= · 000002
002 · Q$CSP · = · 020000
                                                              LD1TBL.
                                                                       000000RG
                                                                                                                                   = 000005
RYTE34= 000042
                               BYTE86=-000126
                                                              LD1X
                                                                       000672R
                                                                                                                           'S#OR
                                                                                                                                  ~ 000006
BYTE35= 000043
                                                             LOADMD
                              BYTE87 = . 000127
                                                                       001006R
                                                                                           ·Q$DMA·=·000001
                                                                                                                           S$0X

    - 0000004

BYTE36= 000044
                              BYTE88= 000130
                                                             LOADMM 000710R
                                                                                       002
                                                                                           · Q$ENBK = · 040000
Q$ENOP = · 020000
                                                                                                                           S$SR
                                                                                                                                   BYTE37 = 000045
                                                             LCI.EN= 000100
                               BYTE09= 000131
                                                                                                                           5$51
BYTE38= 000046
                              BYTE9 = 333311
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                                                                                                                                  = 000014
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of and the
TD$CTR=-176370
                                       T$ICD -- 000040
                                                                              WORD18= 000044
                                                                                                                     WORD46=-000134
                                                                                                                                                            WORD74=.000224
TD$CTW= 176360
TD$INL= 004000
                                                                              WORD19=-000046
WORD2-=-000004
                                       T$MODE = . 004000
                                                                                                                     WORD47= 000136
                                                                                                                                                           WORD75= 000226
WORD76= 000230
WORD77= 000232-
                                       T$08· = 0000036
T$08E·= 004000
                                                                                                                     WORD48= 000140
TD$MEM= 000270
                                                                              WORD20 - 000050
                                                                                                                    WORD49= 000142
WORD5 = 000012
WORD50= 000144
TD$0AR= 176344
                                       T$08F · = · 010000
                                                                              WORD21=-000052
WORD22=-000054
WORD23=-000056
                                                                                                                                                            WORD78= 000234
TD$0TR= 176346
                                       T$0BRA= 000034
                                                                                                                                                           WORD79= 000236
WORD8 = 000020
TD$QRD= 000274
                                       T$0BWA=-000032
                                                                                                                    WORD51=-000146
WORD52=-000150
WORD53=-000152
TD$SW-=-176376
                                       T$0UTA= 100000
T$RBD0= 000200
                                                                              WORD24= 000060
                                                                                                                                                            WORD80= 0000240
TD$TAR= 176372
                                                                              WORD25 - 000062
                                                                                                                                                            WORD81= 000242
TD$TAW≕ 176362
                                       T$RNB - = - 000040
                                                                             WCRD26= 000064
WORD27= 000066
                                                                                                                     WORD54= 000154
                                                                                                                                                           WORD82= 000244
WORD83= 000246
WORD84= 000250
TD$TDR= 176374
                                       T$RSET= 040000
T$SC = 000022
T$SCLK= 020000
                                                                                                                     WORD55= 000156
TD$TDW= 176364
                                                                              WORD28= 000070
                                                                                                                    WORD56=-000160
WORD57=-000162
T$AD· = 000020
T$BA· = 000002
                                                                             WCRD29= 000072
WCRD3 = 000006
WORD30= 000074
                                                                                                                                                           WORD85= 000252
                                       T$SEG1= 000000
                                                                                                                     WORD58= 000164
                                       T$SEG1=.000000
T$SEG2=.000001
T$SEG3=.000002
T$SO-.000001
T$UBUS=.100000
T$JCLK=.000400
                                                                                                                                                           WORD86 = 000254
WORD87 = 000256
T$BD - - 000010
                                                                                                                    WORD59= 000166
WORD6 = 000014
T$BSO·=·100000
T$BT·=·000020
                                                                             WORD31=-000076
WORD32=-000100
WORD33=-000102
                                                                                                                                                           WORD88 - 000260
                                                                                                                    WORD60= 0000170
                                                                                                                                                           WORD89= 000262
WORD9 = 000022.
WORD90= 000264...
T$BTAR= 000030
                                                                                                                    WORD61=-000172
WORD62=-000174
WORD63=-000176
T$BTD·=:002000
                                                                              WORD34= 000104
T$CD· = 000100
T$CLK·= 002000
                                       T$8BEN= 000020
                                                                             WORD35=.000106
WORD36=.000110
                                                                                                                                                           WORD91 = 000266
WORD92 = 000270
                                       UBD.IH= 000020
                                                                                                                    WORD64= 000200
T$DISK= 000200
T$DRD = 000004
T$EMEM= 010000
                                       WORD0 = 000000
WORD1 = 000002
                                                                              WORD37= 000112
                                                                                                                    WORD65=-000202
WORD66=-000204
WORD67=-000206
                                                                                                                                                           WORD93= 000272
                                                                             WORD38= 000114
WORD39= 000116
WORD4 = 000010
                                                                                                                                                           WORD94= 000274
                                       WORD10= 000024
WORD11= 000026
WORD12= 000030
                                                                                                                                                           WORD95=-000276
WORD96=-000300
WORD97=-000302
WORD98=-000304
T$FSAA= 000000
                                                                                                                    WORD67 = 000210

WORD68 = 000210

WORD69 = 000212

WORD7 = 000016

WORD70 = 000214

WORD71 = 000216
T$FSAB= 000004
T$FSAC= 000014
                                                                             WGRD40=.000120
WORD41=.000122
                                       WORD13= 0000032
T$FSB2= 000010
                                       WORD14= 000034
                                                                              WORD42= 000124
                                                                                                                                                           WORD99 - 000306
T$IB: =:000026
                                       WORD15= 000036
                                                                             WORD43= 000126
T$IBAR=:000024
                                                                                                                                                           WRDVAL = 000310
XTREAD = 001000
                                      WORD15=-000033
WORD16=-000040
WORD17=-000042
                                                                             WORD44= 000130
                                                                                                                    WORD72= 000220
T$IBE - = . 020000
T$IBF - = . 040000
                                                                             WCRD45= 000132
                                                                                                                    WORD73= 000222
                                                                                                                                                           XTWRTE = . 000400
. ABS.
             000000
                              000
            попород
                              001
MRLD.
                              002
             001174
ERRORS DETECTED:
                            Ø
VIRTUAL MEMORY USED: 3608 WORDS (-15 PAGES)
DYNAMIC MEMORY: 4916 WORDS (-18 PAGES)
ELAPSED TIME: 00:00:48
MRLD, MRLD/-SP=[20,1]IM,[20,1]MRLD
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27-MAR-80 15:11 PAGE 5 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
MRPR-
             MACRO-MII10
                                                                             .TITLE . MRPR
.PSECT MRPR
        2
3
4
5
6
7
8
9
10
             000000
                                                                             HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS MATCH REPORT PROCESSOR ROUTINES.
                                                                             COMMANDS:
                                                                                         PRINT CONTENTS OF MRP MEMORY
        11
12
                                                                             ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE MRP AT LOCATION
        13
                                                                              MRPXX:
        14
15
        16
17
18
                                                                   **************
        19
                                                                             THE COMMAND TO PRINT MRP DATA MEMORY CANNOT BE USED UNLESS MRP MICROPROGRAM MEMORY AND CP CONTROL STORE HAVE BEEN LOADED VIA THE LOADER PROGRAM.
        20
21
22
23
24
25
26
                                                                   *************
                                                                             .MCALL · CLEF$S,WTSE$S,RDAF$S
        27
28
        29
30
31
                                                                              \begin{array}{lll} \mathsf{TABLE} \cdot \mathsf{OF} \cdot \mathsf{VALID} \cdot \mathsf{MRP} \cdot \mathsf{MEMORY} \cdot \mathsf{MNEMONICS} \cdot \mathsf{AND} \cdot \mathsf{ADDRESSES} \cdot \mathsf{OF} \\ \mathsf{ASSOCIATED} \cdot \mathsf{ROUTINES} \end{array} 
        32
             000000
                                                                PRITBL::
        33
             000000
                                                                             .ASCII-
                                                                                          /MM/
                                                                                                                                :PRINT-MICROPGM-MEMORY
        34
             000002
                          0002761
                                                                             .WORD
                                                                                          PRIMM-
        35
             000004
                              115
                                           194
                                                                             .ASCII
                                                                                          /MD/
                                                                                                                                ; PRINT · DATA · MEMORY
        36
37
                          000476
             000006
                                                                                         PRIMD
                                                                              .WORD
                          000002
                                                                PR1LN
                                                                                          <.-PRITBL>/4
        38
39
        40
                                                                             PRINT-
                                                                             PERFORM THIRD LEVEL PARSING
        41
42
43
                                                                            EG. IN THE CUM
MR>PR MD 0
PARSE THE MD
        44
        45
46
47
             000010
                                                                PR1::
             000010
                                                                             CALL
                                                                                                                                ;LOCATE MEMORY MNEMONIC IN COMMAND LINE
;OK, CONTINUE
;MISSING OPERAND:
                                                                                         FIND
        49
50
             000014
                          103004
                                                                             BCC
                                                                                          1$
             000016
                                                                             CALL
                                                                                          ERR4
       51 000016
51 000022
52
53 000026
54 000032
             000022.
                         000167
                                      001042
                                                                             .TMP
                                                                                          PR4X
                         012700 .
012702
                                      . 000002.
0000000*
                                                                1$:
                                                                             MOV
                                                                                          #PR1LH,R0
                                                                                                                                 : NUMBER OF TABLE ENTRIES
                                                                                                                                MATCH AGAINST COMMAND LINE
                                                                             MOV.
                                                                                          #PR1TBL,R2
                                                                                                                                                                                     55
56
57
            000036
                                                                             CALL
                                                                                         SCAN
            000042
00<u>0</u>044
                         103004
                                                                             BCC
                                                                                          2$
                                                    Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3 MNEMONIC:
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MRPR-
                 0-M1110 27-MAR-80 15:11 PAGE-5-1
                                                Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
       58
           000050 000167
                                 001014
                                                                      JMP····PRiX
       59
                                                                      SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MINEMONIC. SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
       60
       61
       62
63
                                                                          START ADDRESS ONLY. PRINT ONE MEMORY LOCATION.
                                                                          MR>PR · MD · Ø
                                                                          START ADDRESS, LOOP INDICATOR. LOOP ON THE READING OF
       65
       66
67
                                                                           THIS ONE MEMORY LOCATION ONLY. PRINT THE CONTENTS ONLY
                                                                          ONCE:
                                                                          MR>LD-MD-0-L
                                                                          START ADDRESS, END ADDRESS, NO LOOP, PRINT THE CONTENTS OF MEMORY BETWEEN THE START AND END ADDRESSES.
       69
       70
                                                                          MRXPR: MD:07
START: ADDRESS, END: ADDRESS, LOOP: INDICATOR, READ: THE: CONTENTS:
OF: MEMORY BETWEEN: THE: START: AND: END: ADDRESSES, HOWEVER, PRINT:
ONLY: THE: CONTENTS: OF: MEMORY: AT: THE: START: ADDRESS.
                                                                          MR>PR·MD·0 7 L
       78
           000054
                       010167
                                   000000G
                                                          2$:
                                                                      MOV-
                                                                                  R1.RTNPT
                                                                                                                    ;SAVE - POINTER
            000060
                                                                      CALL
                                                                                 FIND
                                                                                                                     ;LOCATE NON-BLANK IN COMMAND LINE
            000064
                                                                      BCC.
                                                                                  3$
                                                                                                                     OK, CONTINUE.
       81
            000066
                                                                      CALL
                                                                                  ERR4
                                                                                                                     : 'MISSING OPERAND'
       82
           000072.
                       000167
                                                                      JMP.
                                                                                 PR1X
                                                                                                                     :EXIT
            000076
                                                                                                                    CONVERT COMMAND LINE VALUE TO BINARY:
CONVERSION SUCCESSFUL
INVALID NUMERIC VALUE
                                                          3$:
                                                                      CALL
BCC:
                                                                                 PACK
       84
           000102
                       103004
                                                                                  4$
       85
           000104
                                                                                  ERR5
            000110
                       000167
                                   000754
                                                                      JMP
                                                                                 PR1X
       87
                       016767
016767
                                                                                 BINWD.MSTRT.
BINWD.MSTR2
       88
           000114
                                   000000G 000000G 4$:
                                                                      MOV.
                                                                                                                    :SAVE-PRINT-START-ADDRESS
:SAVE-IT-TWICE-
:INIT-END-ADDRESS-
            000122
       89
                                   000000G 000000G
                                                                      MOV-
            000130
                       012767
                                              000000G
                                                                      MOV
                                                                                 #-1.MEND
       91
                                                                     START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE), IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
       92
       93
       94
       95
           000136
       96
                                                                                                                     ;SCAN·COMMAND·LINE
                                                                      CALL
            000142
                       103004
                                                                                                                    SOMETHING THERE:
SET-END-ADDR-=-START-ADDR-
JUMP-TO-RTN-
                                                                      BCC -
                                                                                  5$
       98
            000144
                       016767
                                   000000G · 000000G
                                                                      MOV
                                                                                 MSTRT, MEND
       99
           000152
                       000445
      100
            000154
                        122711
                                   000114
                                                                                 #fL,(R1)
                                                                      CMPR
                                                                                                                     :LOOP · INDICATOR
                                                                                                                    #NO. MUST BE UPPER ADDRESS
#SET-FLAG-FOR-OUTPUT CONTROL-
#SET-END ADDR-= START-ADDR-
      102-000160
                       001011
                                                                      BNE .
                                                                                 6$
      103 000162:
104 000170
105 000176
                       052767
                                   000000G-000000G
                                                                                 #OUT, BASE
                       016767
                                   000000G · 000000G
                                                                      MOV:
                                                                                 MSTRT, MEND
                                                                                                                    ;HOW-TO-STOP-LOOP
;JUMP-TO-RTN-
                                                                      CALL
                                                                                 HANG
           000202
                       000431
                                                                      BR
                                                                                 9$
      197
                                                                                                                    CONVERT UPPER ADDRESS
           000204
      108
                                                          6$:
                                                                      CALL
                                                                                 PACK
           000210
      109
                       103004
                                                                     BCC.
CALL
                                                                                 フキ
      110
           000212
                                                                                 ERR5
                                                                                                                     : INVALID NUMERIC
     111
           000216
                       000167
                                  000646
                                                                      JMP.
                                                                                 PR4X
                                                                                                                     ;EXIT-
     112
     113
                                               SAVE END ADDRESS (BINARY)
CHECK FOR LOOP INDICATOR AFTER END ADDRESS (CONDITION 4)
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     114
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MRPR-
         MACRO M1110 27-MAR-80 15:11 PAGE 5-2
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     116
         000222
                   016767
                             000000G 000000G 7$:
                                                                     BIHWD, MEND
                                                                                                  :SET-UP-END-ADDRESS-
:CHECK-FOR LOOP-INDICATOR
    117
118
         000238
000234
                                                           CALL.
                                                                     FIND
                    103414
                                                                    9$
#*L,(R1)
                                                           BCS
                                                                                                  :NO-LOOP-
         000236
                    122711
                             000114
                                                           CMPB
                                                                                                  :CORRECT-LOOP-INDICATOR
     129
         000242
                                                           BEQ.
                                                                     8$
                                                                                                  #YES.
     121
         ййй2аа
                                                                     ERR11
                                                           CALL
         000250
                   000167
                             000614
                                                           JMP
                                                                     PR1X
     123
         000254
                   052767
                             000000G 000000G 8$:
                                                           BIS
                                                                     #OUT,BASE
                                                                                                  SET OUTPUT CONTROL
     124
         000262
                                                                                                  :HOW-TO-STOP-LOOP
     125
         000266
     126
                   016701
                             000000G
                                                           MOV:
                                                                     RTHPT,R1
                                                                                                  :POINT.TO.ROUTINE
:JUMP.TO.ROUTINE.
         000272
                   000171
                             000000
                                                                     @(R1)
     128
     129
     130
                                                           PRINT FROM MICROPGM MEMORY
     131
     132.000276
                                                 PRIMM:;
     133
         000276
                   016746
                                                           MOV
                                                                     MMHIGH,-(SP)
                                                                                                  :SUPPLY-UPPER-MEMORY LIMIT,
     134
         000302
                   016746
                             000000G
                                                           MOV.
                                                                     MMLOW, - (SP)
                                                                                                  :LOWER · LIMIT ·
         000306
                                                                    BUFS2
                                                           CALL
                                                                                                  ;PREPARE FOR LOAD
;NO ERROR
     136
         000312
                   103002
                                                           BCC
     137
         000314
                   000167
                             000550
                                                           JMP
                                                                     PR1X
                                                                                                  :ERROR
     138
     139
         000320
                   016746
                             природе
                                                                                                  :SEND CURRENT ADDRESS
:SEQUENCE UP TO PRINT START ADDRESS
                                                 1$:
                                                           MOV-
                                                                     MSTR2,-(SP)
    140
         000324
                                                          CALL
MOV-
                                                                     SEQMM
    141
         000330
                   012746
                             000006
                                                                     #<MMOE+MMLEFT>,-(SP)
         000334
                                                           CALL
                                                                    MRPCR -
                                                                                                  ;DIRECT-CHTL-WORD-TO MRP:
    i 43
         000340
                   005046
                                                          CLR
                                                                     -(SP)
    144 000342
                                                                                                  :ISSUE-CLOCK-TO-REINHIBIT-BR-SELECT-
:REQUEST-MRP-TO-LOD-BUS-NS-
                                                          CALL
                                                                    LBMRP
    145
         000346
                                                          CALL
                                                                    MRPLB.
    146
         000352
                   012667
                             000000G
                                                                     (SP)+,DATA1
                                                                                                  :GET-MRP-WORD-FROM-STACK-
    147
    148
         000356
                             000000G
                                                                                                  :SEND-CURRENT-ADDRESS
:SEQUENCE-UP-TO-PRINT-START-ADDRESS
:SELECT-RIGHT-HALF-OF-PLR-
:DIRECT-CNTL-WORD-TO-MRP-
                                                          MOV.
                                                                    MSTR2,-(SP)
    149
         000362
                                                          CALL
                                                                    SERMM.
    150
         000366
                   012746
                             000004
                                                           MOV.
                                                                     #<MMOE>,-(SP)
         000372
                                                          CALL
CLR -
                                                                    MRPCR
    152
         000376
                   005046
                                                                     -(SP)
    153
         000400
                                                          CALL
                                                                    LBMRP
                                                                                                  :CLOCK - TO - REINHIBIT - BRANCH - REGISTER -
         000404
                                                          CALL
                                                                    MRPLB
                                                                                                  REQUEST MRP TO LOD BUS
GET MRP WORD FROM STACK
CLEAR MRP CONTROL REG
    155
         000410
                             000000G
                                                          MOV:
                                                                     (SP)+,DATA2
    156
         000414
                   005046
                                                          CLR
                                                                     -(SP)
    157
         000416
                                                          CALL
                                                                    MRPCR
    158
         000422
                                                          CALL
                                                                    PRDATA-
                                                                                                  :PRINT - MEMORY - CONTENTS
    160
        000426
                   103002
                                                          BCC -
                                                                    2$
                                                                                                  : NOT · END · OF · MEMORY
    i61
        000430
                   000167
                            000434
                                                                    PR1X
                                                                                                  ; END · OF · MEMORY
    162
                             000000G 000000G 2$:
    163
         000434
                   066767
                                                          ADD:
                                                                    INCVAL, MSTR2
                                                                                                  ; ADVANCE · ADDRESS
    164
        000442
                   026767
                            000000G 000000G
                                                          CMP.
                                                                    MSTR2, MEND
                                                                                                  ; HAS UPPER MEMORY LIMIT BEEN REACHED.
    165
        000450
                   101723
                                                          BLOS
                                                                                                  :NO, CONTINUE
                                                                    1$
        000452
    166
                  032767
                            000000G :000000G
                                                                    #LOOP, BASE
                                                                                                  :L00P:0N:2
        000460
                  001002
                                                          RNE
                                                                    34
                                                                                                  ; YES, CONTINUE
    168
        000462
                  000167
                            000402
                                                          JMP
                                                                    PR1X
                                                                                                  HEXTEN TARTHADDR 255
    169
        000466
                  016767
                            000000G.000000G.3$:
                                                          MOV.
                                                                    MSTRT, MSTR2.
                                                                                                                                 Mark Alle
    170
        000474
                  000711
                                                                    1$
                                                                                                  :AND REPEAT PRINT.
   171
```

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0 M1110 27-MAR-80 15:11 PAGE 5-3
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MRPR-
     172
     173
                                                             PRINT FROM DATA MEMORY
     174
     175
         000476
                                                  PRIMD::
     176
177
         000476
000502
                    016746
                              000000G
                                                                       MDHIGH,-(SP)
                                                                                                     SUPPLY MEMORY UPPER LIMIT LOWER LIMIT PREPARE FOR LOAD
                    016746
                              000000G
                                                             MOV
                                                                       MDLOW, - (SP)
         000506
                                                             CALL
                                                                       BUFSET.
     179
         000512
                                                             BCS -
                                                                       PR1X
                                                                                                     :ERROR
     180
         000514
     181
                    012746
                              000377
                                                             MOV-
                                                                       #377,-(SP)
                                                                                                     ;SET-MRP-MICRO-ADDRESS-=-X*FF* (JUMP-SELF)
     182
         000520
                                                                       SEQMM.
     183
     184
         000524
                    005046
                                                             CLR-
                                                                       -(SP)
                                                                                                     :REINHIBIT BRANCH CONTROL:REG
     185
         000526
                                                             CALL:
                                                                       MRPCR
                                                                                                                         186
         000532
                    005046
                                                             CLR.
                                                                       -(SP)
         000534
                                                            CALL
                                                                       LBMRP
                                                                                                     #SINGLE · CLOCK · TO · REINHIBIT · BRANCH · REGISTER
     188
         000540
     189
                    005046
                                                            CLR-
                                                                       -(SP)
                                                                                                     ;START-MICROCODE-AT-0
     190
         000542
                                                             CALL
                                                                       SEGGS
     191
     192 000546
                    005046
                                                            CLR
                                                                       -(SP)
                                                                                                     :REINHIBIT BRANCH-CONTROL-REG-
     193
         000550
                                                            CALL
                                                                      CPCR
     194
          000554
                    005046
                                                            CLR
     195
         000556
                                                            CALL
                                                                      LBCP
                                                                                                     :SINGLE · CLOCK · TO · REINHIBIT · BRANCH · REGISTER ·
     196
     197
          000562
                   012767
012767
                              001000
                                       -176422 - 
                                                            MOV-
                                                                       #Q$REBK,QR$CR2
                                                                                                     :RE-ARM INTERRUPTS
:SET-SEARCH MODE + ENABLE INTERRUPTS
:CLEAR ALL SELECTIONS
     198
         000570
                              120000
                                        176422
                                                            MOV.
                                                                       #<Q$SM+Q$ENOP>,QR$CR2
     199
         000576
                   012746
                              000360
                                                            MOV.
                                                                      #Q$CSEL,-(SP)
#<Q$LBD+Q$LBP>,(SP)
    200
                   052716
052716
         000602
                              001001
                                                            BIS
                                                                                                     #CLEAR DRIVE AND PULSE 
#CLEAR CP NO-CLOCK 
#SET NOTHING
    201
         000606
                              170000
                                                            BIS
                                                                      #<Q$MNC+Q$CNC>,(SP)
     292
         .000612.
                    005046
                                                            CLR
                                                                       -(SP)
    203 000614
                                                                      CSR4
                                                            CALL
    204
         000620
                    012767
                              ававав.
                                                                      #Q$RDMD.QR$LBR ;MOVE.ATTN CODE.TO.LOD.BUS.REG
#<Q$ATTN+Q$$M+Q$ENOP>.QR$CR2.;SET.ATTN.CODE.READY:..
                                        176424
                                                  PRMD:
                                                            MOV.
    206
         000626
                    012767
                              120100
                                        176422
                                                            MOV.
    297
         888634
                   016701
                              176422
                                                  1$:
                                                            MOV
                                                                      QR$CR2,R1
                                                                                                     :READ CSR2
    208
         000640
                   032791
                              000100
                                                            BIT
                                                                      #Q$ATTH,R1
                                                                                                     :ATTN-CLEAR
    209
         000644
                   001373
                                                            BNE
                                                                                                     ;NO, READ AGAIN.
    210
                                                                      MSTR2.QR$LBR. ;CD.MEMORY START.AI
#KQ$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SEC.CC.TO.CP.
    211
         000646
                   016767
                              000000G-176424
                                                            MOV
                                                                                                     CD MEMORY START ADDRESS.
    212
         000654
                   012767
                              120040 176422
    213
         000662
                   016701
                              176422
                                                  2$:
                                                            MOV.
                                                                      QR$CR2,R1
                                                                                                    :READ CSR2
:IS-CC-TO-CP-CLEAR-
                   032701
    214 000666
                              000040
                                                            BIT
                                                                      #Q$CCCP,R1
    215 000672.
216
                   001373
                                                            BHE
                                                                                                     :NO, READ AGAIN
                                                                      #1.QR$LBR: ;TRANSFER:COUNT:=:1 WORD:
#<0$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
QR$CR2.R1 ;READ:CSR2
#Q$CCCP.R1 ;IS:CC:TO:CP:CLEAR
3$ ;NO:READ:AGAIN:
    217
         000674
                   012767
                             000001
                                        176424
                                                            MGV.
         000702
                   012767
    218
                              120040
                                        176422
                                                            MOV.
    219 000710
                   016701
                              176422
                                                  3$:
                                                            MOV:
    220 000714
                   032701
                              000040
                                                            BIT.
    221 000720
                   001373
                                                                                                    CC MEMORY DATA BUFFER
    223 000722.
                   012767
                                                                      *DATA1.QR$LBR: ;CC:MEMORY DATA:BUI
*(Q$CCCP+Q$SM+Q$ENOP),QR$CR2:;SET:CC:TO:CP
                             000000G-176424
                                                            MOV.
    224 000730
                   012767
                             120040 176422
                                                            MOV.
    225
    226
                                                            WAIT-FOR-INTERRUPT-FROM-CP-
    227
    228 000736
                                                            WT3E$S∙
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CLEF$S - #EFN.3
230
    000750
231
232
233
                                                           RE-ARM-INTERRUPTS
    000762
000770
000776
                012767
                           100400
                                      176422 -
                                                           MOV-
                                                                      #<Q$SM+Q$CHB>,QR$CR2
                                                                                                     :CLEAR · INTERRUPT · (USE · HIT · BUFFER · INT)
                                                                     #<Q$SM+Q$REBK>,QR$CR2 ;RE-ARM
#<Q$SM+Q$ENBK+Q$ENDP>,QR$CR2 ;ENABLE
235
236
237
                012767
                           101000
                                     176422
                                                           MOV-
                                     176422 -
                                                           MOV:
                012767
                           160000
238
239
240
                                                                                                     :PRINT-MEMORY-CONTENTS
:END-OF-MEMORY, EXIT
     001004
                                                                     PRDATA:
                                                           CALL
    001010
                103417
                                                           BCS
                                                                     PRMDX:
                                                                                                     :ADVANCE:ADDRESS:
:HAS:UPPER MEMORY:LIMIT:BEEN:REACHED
241
     001012
                           000000G - 000000G
                866767
                                                           ADD.
                                                                      INCVAL, MSTR2
                                                                     MSTR2, MEND
242
     001020
                026767
                           000000G · 000000G
                                                           CMP
243
     001026
                101674
                                                           BLOS
                                                                                                     :NO, CONTINUE
                                                                                                     ;LOOP·ON·?
;NO. EXIT·
;INIT·START-ADDRESS.
244 001030
245 001036
                032767
                           000000G · 000000G
                                                           BIT
                                                                      #LOOP,BASE
                001404
                                                                     PRMDX
                                                           BEO
246
     001040
                016767
                           000000G · 000000G
                                                           MOV
                                                                     MSTRT, MSTR2
247
248
     001046
                000664
                                                                      PRMD
                                                                                                      ; AND · REPEAT · PRINT
                                                                                                     ;CLEAR · NOTHING · IM · CSR1
;SET · NO+CLOCKS ·
249
     001050
                005046
                                                PRMDX:
                                                           CLR-
                                                                      -(SP)
250 001052
251 001056
252 001062
                012746
                           176000
                                                           MOV-
                                                                      #Q$NCLK,-(SP)
                                                           CALL
                012767
                           000000
                                     176422
                                                                                                      ;SET-LOAD-MODE
                                                           MOV:
                                                                      #0,QR$CR2
253
254
255
255 001070
256 001070
                                                PR1X:
                           000000C · 000000G
                                                           BIC:
                                                                                                      :CLEAR PRINT CONTROL FLAGS
                042767
                                                                      #<ONCE+OUT>,BASE
257 001076
258 001102
259
                                                                                                      :KILL AST (IF THERE WAS ONE)
                                                           CALL
                                                                      KILL
                300167
                                                           JMP
260
                000001
                                                            .END
```

O M1110 27-MAR-80 15:11 PAGE 5-5 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 ALTICKE = : 040000 BYTE39= 000047 BYTE90=-000132 MDHIGH= · ****** GX D\$FC = 000045 ALUOE -- 004000 A01 -- 010000 BASE -- ******* BYTE4 = 000004 BYTE91 = 000133 MDLOW = · ****** GX · MEND · = · ****** GX · = · 000044 = · 000046 O\$FO BYTE92= 000134 BYTE40=:000050 Q\$FP BYTE41 = . 000051 BYTE93=-000135 MMADRD = - 000100 000002 Q\$ICP-=-000006 Q\$IHB-=-000003 Q\$IHRL=-000002 BINUD := : ****** GX: BYTE42= 000052 BYTE94= 000136 MMHIGH= ****** GX BYTE43 = . 000053 MMLEFT= 000002 BITVAL = . 000000 BYTE95= 000137 = · 0000001 = · 000002 8YTE44= 000054 BYTE96= 000140 MMLOW = ****** GX BYTE45 = 000055 BYTE46 = 000056 BITi BYTE97=-000141 MMOE - - 000004 Q\$IMRP= 000007 BIT10 = 002000 MMWRTE = . 000010 BYTE98= 000142 Q\$LBD = 001000 Q\$LBDP= 001001-BIT11 = 004000 BYTE47=-000057 MNOBRE = 100000 MREN1 = 000001 MREN2 = 020000 BYTE99= 000143 BIT12 -- 010000 BYTE48= 000060 BYTVAL = . 000144 Q\$LBP - = . 000001 BIT13 = 020000 BYTE49= 0000061 CBKALL= 001000 Q\$LDCD=-000003 BIT14 = 040000 BYTE5 = 000005 CBKCLK= 000400 MRPCR - = · ****** GX -Q\$LDMD=.000004 MRPLB = ******* GX BIT15 = 100000 BYTE50= 0000062 CHOBRE = 100000 O\$L DPP= : 002000 BIT2. = 000004 BYTE51= 000063 CPCCEN=-010000 MRPXX = ****** GX Q\$LHP - = - 010000 BIT3 = 0000010 BYTE52 = 000064 BYTE53 = 000065 CPCR: =: ***** GX: MSTRT -- ******* GX-Q\$MNC - = - 140000 --000020 BIT4 CPREAD= 040000 MSTR2 - = - жжжжжжж GX -Q\$MR = 000052 = 000040 BYTE54= 000066 CPWRTE = . 020000 MSYN = 000040 Q\$MRP - = . 000040 BYTE55= 000067 BYTE56= 000070 BIT6 = 000100 CSADRD=-000004 = 000144 Q\$MRP2=:000240 = - 000200 CSEQCI = 100000 ONCE -BIT7 Q\$MSC -- 040000 Q\$MSET= 000004 = .000400 BYTE57= 0000071 = жжжжжж БХ DUT: BITS = 001000 BYTE58=-000072 = жжжжжж БХ Q\$MSP - = 100000 PACK: BUFSET= ****** GX BYTE59 = . 000073 CSWRTE = - 000100 Q\$NCLK= 176000 Q\$PP = 000100 PLB. = .000010 BUFS2 = ******* GX BYTE6 = 000006 DATA1 = · ****** GX = 000020 PLC: BYTE0 = 000000 BYTE1 = 000001 BYTE60= 000074 DATA2 - ****** GX PLD. = .000030 Q\$PPSW= . 000320 BYTE61= 000075 BYTE62= 000076 DBR:RD= 000001 PLRWR - = - 000200 Q\$PP2:=:000300 BYTE10= 000012 PLR.EN= 000200 DB\$CPP=:001457 Q\$QHLT= 000013 BYTE11= 000013 BYTE63= 000077 DB\$SPT= 000026 = 000043 PRDATA=-***** GX 0.\$0L BYTE12= 000014 BYTE13= 000015 002 · 0\$QLA · = · BYTE64= 000100 DB\$TPC=-000023 000620R PRMD 000053 002 Q\$QLB = 000054 002 Q\$QLR = 000001 Q\$QW = 000042 BYTE65= 000101 DISPGS = 100000 PRMDX-001050R BYTE14= 0000016 BYTE66 = . 000102 DMAAUR = . 000005 PR1 ARREST PARK BYTE15= 000017 BYTE67= 000103 DMARRD= 000003 PR1LN - - 000002 · G BYTE16=-000020 BYTE17=-000021 BYTE68=-000104 BYTE69=-000105 DMARWR = . 000004 PRIMD. 000476RG 002 · Q\$RDCD = · 000005 002 0\$RDMD= 000006 002 0\$RDMD= 000006 002 0\$REBK= 001006 002 0\$RNC = 0060007 0\$RSC = 004000 EFN.3 = ******* GX ENBR * = *010000 000276RG PR1MM-BYTE18= 0000022 BYTE7 = 0000007 PR1TBL MANAMARG BYTE19= 000023 BYTE70= 000106 ERR11 = ****** 006000 PR1X. 001070R BYTE2 - - 000002 BYTE71 - 000107 BYTE72 - 000110 ERR4 = ****** GX QR\$CR1= 176420 BYTE20= 0000024 = · ****** GX · = · ****** GX · QR\$CR2= 176422 QR\$LBR= 176424 Q\$RSET=: Q\$SM =: Q\$SP =: ERR5 пополія BYTE21= 000025 BYTE73 = . 000111 ERR7 100000 = ****** GX = ******* GX BYTE74= 000112 BYTE75= 000113 BYTE22= - 000026 FIND. Q\$ATTN= 000100 000120 BYTF23= : 000027 Q\$BCL - = 000001 Q\$CCCP = 000040 HANG Q\$SP2 - 000340 BYTE76=-000114 BYTE77=-000115 RGO.EN= 000200 RGO.VA= 020000 BYTE24= 000030 INCVAL= ******* GX KILL - жжжжжж GX-LBCP - жжжжжж GX-BYTE25=-000031 Q\$CHB·=·000400 Q\$CHRL=-000200 Q\$CLR-=-000040 Q\$CNC-=-030000 Q\$CPC-=-000060 Q\$CPCC--000010 BYTE26= 000032 BYTE78= 000116 RTNPT: = : ****** GX: BYTE27 = · 000033 BYTE79= 000117 LBMRP = · ******** GX · = - ****** SCAN $-GX_{2}$ BYTE28=-000034 BYTE8 = 000010 LOC.EN= 0000100 SEQCS - = - ****** GX. BYTE29= 000035 BYTE3 = 000003 BYTE80 = . 000120 LOC.WA--040000 LOC.WB--100000 LOOP- -->********* GX-SEQMM- = - жжжжжж BYTE01 = . 000121 SEQ.CI= 000010 U\$CPCC=+000010 Q\$CP2+=+000260 Q\$CSC+=+010000 Q\$CSEL=+000360 Q\$CSET=+000002 S\$CLR = 000000 S\$LA = 000001 BYTE30= 000036 BYTE82= 000122 MAREN1 = 0000001 MAREN2 = 004000 BYTE31=-000037 BYTE83=-000123 5\$0B S\$0F S\$6X 000005., BYTE32=:000040 BYTERA= 000124 BYTE85 = . 000125 MARLOD = 010000 000006 BYTE33= 000041 BYTE34= 0000042 BYTE86=-000126 MAROUT= 0000002 Q\$CSP - = - 020000 000004 MAR.LO= 002000 BYTE87= 000127 O\$DMA . = . 000001 BYTE35 = : 000043 SŒŚÞ 000002 BYTE88 = · 000130 MAR.OU= 000040 BYTE36= 000044 Q\$ENBK = - 040000 000010 9\$91 BYTE37= 000045 MBKALL= .001000 Q\$ENOP = . 020000 BYTE89= . 000131 000014 BYTE38= 000046 MBKCLK=-000400 Q\$FAL - = - 004000 17637/0 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

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MACRO M1110 27-MAR-80 15:11 PAGE 5-6
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MRPR-
SYMBOL TABLE
TD$GTW= · 176360
TD$INL= · 004000
TD$MEM= · 000270
                                       T$ICD - = - 000040
                                                                             WORD18= 000044
                                                                                                                  WORD46=:000134
WORD47=:000136
WORD48=:000140
                                                                                                                                                         WORD74=-000224
                                                                                                                                                        WORD75=-000226
WORD76=-000230
WORD77=-000232
                                      T$MODE = 004000
T$OB · = 000036
T$OBE · = 004000
                                                                            WORD19=-000046
WORD2-=-000004
TD$OAR=-176344
                                                                             WORD20=-000050
                                                                                                                  WORD49= 000142
                                                                                                                  WORD5 = 000012
WORD50= 000144
WORD51= 000146
                                      T$0BF · = · 010000
T$0BRA = · 000034
                                                                            WORD21 = 000052
WORD22 = 000054
TD$OTR=.176346
                                                                                                                                                         WORD78= 000234
TD$QRD= 000274
                                                                                                                                                        WORD79 = 000236
WORD8 = 000020
TD$SW -- 176376
                                       T$08WA= 000032
                                                                            WORD23= 000056
                                      T$0UTA = 100000
T$RBDO = 000200
T$RNB = 000040
TD$TAR= 176372
TD$TAW= 176362
                                                                             WORD24= 000060
                                                                                                                   WORD52=-000150
                                                                                                                                                         WORD80= 000240
                                                                            WORD25=-000062
WORD26=-000064
WORD27=-000066
                                                                                                                   WORD53=-000152
                                                                                                                                                         WORD81=-000242
TD$TDR= 176374
                                                                                                                  WORD54= 000154
                                                                                                                                                        WORD82=:000244
TD$TDW= 176364
                                       T$RSET= 040000
                                                                                                                  WORD55= 000156
                                                                                                                                                         WORD83= 000246
T$AD· = 0000020
T$BA· = 000002
T$BD· = 000010
                                      T$SC - 000022
T$SCLK - 020000
                                                                             WORD28--000070
                                                                                                                  WORD56=-000160
                                                                                                                                                         WORD84= 000250
                                                                                                                  WORD57= 000162
WORD58= 000164
                                                                            WORD29=-000072
WCRD3 =-000006
                                                                                                                                                         WORD85=.000252
                                       T$SEG1 = . 000000
                                                                                                                                                         WORD86= 000254
T$BSO·=·100000
T$BT·=·000020
                                       T$SEG2= 0000001
                                                                             WORD30- 000074
                                                                                                                  WORD59=.000166
                                                                                                                                                         WORD87=-000256
                                      T$SEG3=-000002
T$SO- =-000001
T$UBUS=-100000
                                                                            WORD31=-000076
WORD32=-000100
WORD33=-000102
                                                                                                                  WORD6 = 000014
WORD60= 000170
WORD61= 000172
                                                                                                                                                         WORD88=.000260
T$BTAR= 000030
                                                                                                                                                        WORD89=-000262
WORD9 =-000022-
T$BTD = 002000
T$CD = 000100
T$CLK = 002000
                                      T$1CLK= 000400
T$8BEH= 000020
UBD:IN= 000020
                                                                             WORD34= 000104
                                                                                                                  WORD62= 000174
                                                                                                                                                         WORD90=.000264
                                                                                                                                                        WORD91= 000266
WORD92= 000270
WORD93= 000272
                                                                            WORD35=-000106
WORD36=-000110
WORD37=-000112
                                                                                                                  WORD63--000176
T$DISK=.0002000
T$DRD.=.000004
                                                                                                                  WORD64=-000200
WORD65=-000202
                                      WORD4 = 000000
WORD4 = 0000002
                                                                                                                                                         WORD94= 000274,
WORD95= 000276
T$EMEM= 010000
                                                                             WORD38=-000114
                                                                                                                   WORD66= 000204
                                                                                                                  WORD65=-000204
WORD67=-000206
WORD68=-000210
WORD69=-000212
WORD7 =-000016
                                      WORD10=-000024
WORD11=-000026
T$FSAA≃.000000
                                                                            WORD39=-000116
 T$FSAB= 0000004
                                                                            WORD4 = 000010
WORD40 = 000120
                                                                                                                                                         WORD96=_000300
WORD97= 000302
T$FSAC= 0000014
                                       WORD12= 000030
 T$FSB2=-000010
                                       WORD13= 000032
                                                                            WCRD41= 000122
                                                                                                                                                         WORD98 = .000304
                                      WORD13--000032

WORD14--000034

WORD15--000040

WORD17--000042
                                                                                                                   WORD70= 000214
                                                                                                                                                         WORD99=-000306
WRDVAL=-000310
XTREAD=-001000
T$IB: =:000026
                                                                            WORD42= 000124
T$IBAR=:000024
                                                                            WORD43= 000126
                                                                                                                  WORD71= 000216
WORD72= 000220
 T$IBE⋅=⋅020000
                                                                            WORD44= 000130
                                                                             WORD45= 000132
                                                                                                                   WORD73=-000222
                                                                                                                                                         XTWRTE = . 000400
 . ARS:
             000000
                              000
             000000
                              001
MRPR
                              002
             001106
ERRORS DETECTED:
                             0
VIRTUAL MEMORY USED:
                                  3569 WORDS: (-14 PAGES)
DYNAMIC MEMORY: 4916 WORDS: ( 18 PAGES)
ELAPSED TIME: 00:00:47
OKPR, MRPR/-SP=[20,1]IM, [20,1]MRPR
```

```
MRREST- MACRO-M1110 27-MAR-80 15:13 PAGE 5
Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                          FITLE ... MRREST. ...
      23456789
101
         000000
                                                          .PSECT: MRREST:
                                                         HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
                                                         MATCH REPORT PROCESSOR ROUTINES
                                                         COMMANDS:
                                                                   STORE INTO AN MRP REGISTER
READ FROM A REGISTER
RESET MRP
                                                         ST
                                                         RF
                                                         RS
                                                                   CALL HOR LOADER
      13
                                                         ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE MRP AT LOCATION MRPXX.
      14
15
      16
      17
      18
                                                                                                                   19
                                                         STORE -
      20
21
22
                                                          TABLE OF VALID REGISTER MNEMOONICS AND ASSOCIATED ROUTINE
                                                         ADDRESSES.
      23
          000000
                                                STITBL::
      24
25
26
          000000
                       103
                                 122
                                                          .ASCII
                                                                   ZCRZ
                                                                                                :CONTROL REG
          000002
                   0002i6
                                                          .WORD
                                                                   STICR
          000004
                                 113
                       192
                                                          .ASCII:
                                                                   ZBKZ
                                                                                                ;BREAKPOINT REG
          000006
                   000230
                                                          .WORD
                                                                   ST1BK-
      28.000010
                                 101
                                                          .ASCII
                                                                   ZMAZ
                                                                                                :MEMORY-ADDRESS-REG
      29
         000012
                   000252
                                                          .WORD
                                                                   STIMA
      30
                       129
                                 114
                                                          .ASCII
                                                                   /PL/
                                                                                                :PIPELINE · REG · LEFT
          000016
                   000314
                                                                   STIPL
                                                          .WORD
          000020
                                 122
                                                          .ASCII
                                                                   /PR/
                                                                                                : PIPELINE - REG - RIGHT
      33
34
          000022
                   000336
                                                          .WORD
          000024
                       121
                                 122
                                                          .ASCII
                                                                   /QR/
                                                                                                ;Q+REG
      35
          000026
                   000360
                                                          .WORD
                                                                   STIDE
          000030
                                                          .ASCII
                                 127
                                                                   /LW/
                                                                                                ;"WORD-LOCATION:
      37
          000032
                   0004324
                                                          .WORD
                                                                   STILW-
          000034
      38
                       114
                                 123
                                                          .ASCII
                                                                   /LS/
STILS
                                                                                                ;'SENTENCE' LOCATION
      39
          000036
                   000440
                                                          . MORD
      40
          000040
                                 120
                                                                   ZLPZ
                       114
                                                          .ASCII
                                                                                                : "PARAGRAPH" LOCATION
                                                                   STILPG
      41
          000042
                   0004461
                                                          .WORD
      42
43
                   000011
                                                ST1LN
                                                                   <.-ST1TBL>/4
      44
                                                         LOCATION - WORD - WORD - AREAS -
      45
          000044
000046
                                                LOCWRD: .WORD
      46
                   000000
      47
                   обобор
                             040000
                                      100000
                                                LOCTBL: .WORD.
                                                                   0.BIT14.BIT15.BIT15+BIT14
          000054
                   140000
      48
      49
50
51
      52
53
                                                         TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES
                                                                                                          54
55
         000056
                                                RE1TBL::
                                       Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
```

000056

115

101

```
MRREST MOD M1110 27-MAR-80 15:13 PAGE 5-1
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
              57
                     000060
                                            3005641
                                                                                                                                   .WORD
                                                                                                                                                        REIMA -
              58
                     000062
                                           115
000612
                                                                         120
                                                                                                                                    .ASCII
                                                                                                                                                        /MP/
                                                                                                                                                                                                                         ;READ·MICROPGM·ADDR·
              59
                     000064
                                                                                                                                    .WORD
                                                                                                                                                        RE IMP
                      000066
                                                                         127
                                                    123
                                                                                                                                                                                                                         :READ · UNIBUS · STATUS · WORD ·
                                                                                                                                   .ascit.
                                                                                                                                                         ZSIJZ
             61
                     000070
                                           0006441
                                                                                                                                                        RE1SW-
                                                                                                                                   .WORD
                    000072
                                           104
000736
             62
                                                                         127
                                                                                                                                   .ASCII
                                                                                                                                                                                                                          ;READ·UNIBUS·DATA·WORD - 1987 1987
                                                                                                                                                         /DW/
             63 000074
                                                                                                                                    .WORD
                                                                                                                                                        RE1DW-
                                           000004
                                                                                                            RE1LH-
                                                                                                                                                        <.-RE1TBL>/4
             65
66
67
                                                                                                                                  STORE
                                                                                                                                  PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
MR>ST-0 CR
             69
70
                                                                                                                                  PARSE THE '0'
             72
73
              74
                     000076
                                                                                                             ST1::
                      000076
                                                                                                                                  CALL
                                                                                                                                                        FIND
                                                                                                                                                                                                                         :FIND OPERAND IN COMMAND LINE :OK, CONTINUE : The second s
                      000102
                                            103004
                                                                                                                                  BCC.
                                                                                                                                                        1$
ERR4
                     000104
000110
              77
                                                                                                                                  CALL
              78
                                           000167
                                                                 000354
                                                                                                                                   JMP
                                                                                                                                                        STIX
                                                                                                                                                                                                                         RETURN TO MRP (PROMPT)
CONVERT VALUE IN COMMAND LINE TO BINARY
                      000114
                                                                                                            1$:
                                                                                                                                  CALL
                                                                                                                                                        PACK
             88
                     000120
                                                                                                                                  BCC.
                                                                                                                                                        2$
             81
                     000122
                                                                                                                                                        ERR5
                                                                                                                                  CALL
                                                                                                                                                                                                                         : INVALID - NUMERIC
             82
                     000126
                                           000167 000336
                                                                                                                                                        STIX
             83
                                                                                                                                 CONTINUE PARSING THE COMMAND LINE FIND THE REGISTER MNEMONIC
             84
                                                                                                            ;
              85
              86
                     000132
000136
             87
                                                                                                            2$;
                                                                                                                                  CALL:
                                                                                                                                                       FIND
                                                                                                                                                                                                                        ;LOCATE · A · NON-BLANK ·
             88
                                           103004
                                                                                                                                  BCC.
                                                                                                                                                        3$
             89
                     000140
                                                                                                                                  CALL
                                                                                                                                                        ERR4
                                                                                                                                                                                                                         :NOTHING · THERE · - ERROR
                     000144
                                           000167
                                                                000320
             91
             92
                                                                                                                                 MATCH-REGISTER-MNEMONIC-FROM-THE COMMAND-LINE-AGAINST
THE-TABLE-OF VALID-MNEMONICS:
             93
             94
             95
                     000150
000154
                                           012700
                                                                                                                                                                                                                        :NUMBER OF TABLE ENTRIES :R2 -> TABLE :MATCH AGAINST COMMAND LINE
                                                                                                            3$:
                                                                                                                                  MOV
                                                                                                                                                        #ST1LH,R0
#ST1TBL,R2
             96
                                           012702
                                                                                                                                  MOV.
             97
                     000160
                                                                                                                                  CALL
                                                                                                                                                        SCAN
            98
99
                    000164
000166
                                            103004
                                                                                                                                  BCC -
                                                                                                                                                        4$
                                                                                                                                                                                                                         :OK, CONTINUE
                                                                                                                                  CALL
                                                                                                                                                        ERR6
           100
                     000172
                                           999167
                                                                000272
                                                                                                                                  JMP -
           101
                                                                                                                                 SAVE-THE-POINTER-TO-THE-ROUTINE-ASSOCIATED WITH-THE-REGISTER, R1 -> ROUTINE-ADDRESS.
CALL-ROUTINE TO-SCAN-COMMAND-LINE-FOR-LOOP INDICATOR.
           102
           103
           104
           105
                                                                                                                                 EG. MR>ST-0 CR-L-
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT.
JUMP-TO-ROUTINE-TO-LOAD-REGISTER.
           106
           197
                                                                                                                                                                                                                       SAVE POINTER TOARTH
                                                                                                                                                                                                                                                     108
          109 000176 010167
                                                                000000G
                                                                                                           4$:
                                                                                                                                 MCV.
                                                                                                                                                       R1.RTHPT
          110 000202
111 000206
                                                                                                                                 CALL
                                                                                                                                                       LOOPR.
                                         016701
                                                               000000G
                                                                                                           ST1IH:
                                                                                                                                 MOV-
                                                                                                                                                       RTHPT, R1
          112-000212- 000171
                                                               000000
                                                                                                                                  JMP
                                                                                                                                                       @(R1)
                                                                                                                                                                                                                         :EXECUTE ROUTINE
                                                                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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MRREST MACRO M1110 27-MAR-80 15:13 PAGE 5-2
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     114
     115
                                                            MRP - CONTROL - REG -
     116
117
         000216
                                                  ST1GR::
     118
         000216
                   016746
                             000000G
                                                            MOV.
                                                                                                    :MOVE-DATA TO-LOD-BUS-REG:
:DIRECT-CNTL-WORD-TO MRP:
:TEST-LOOP FLAG:
                                                                      BINUD: - (SP)
     119 000222
                                                            CALL
                                                                      MRPCR
     128
         000226
                    000512
                                                                      ST1LP
     121
122
                                                  ;
                                                            BREAKPOINT REG
     123
     124 000230
                                                  ST1BK::
         000230
                                                                                                    SET MRP CHTL FOR BREAKPOINT
DIRECT CHTL WORD MOMENT
LOAD DATA WORD INTO LOAD BUS REG
     125
                    012746
                                                            MOV-
                                                                      #MBKCLKEN,-(SP)
                              000400
     126
          000234
                                                            CALL
                                                                      MRPCR.
                                                                      BINWD,-(SP)
     127
          000240
                    016746
                              000000G
                                                            MOV.
     128 - 000244
                                                            CALL
                                                                                                    ;SET.BCE.CNTL.WORD.
;TEST.LOOP FLAG.
                                                                      LBMRP
          000250
                    000501
                                                                      ST1LP
     130
     131
                                                            MEMORY ADDRESS REG
                                                                                                                and the second second
     133
          000252
                                                  STIMA::
          000252
     134
                    012746
                              000200
                                                            MOV-
                                                                      #<PLR.EN>,-(SP)
                                                                                                     :SET-CHTL-BITS-FOR-MRP
          000256
     135
                                                            CALL
                                                                      MRPCR
                                                                                                     :DIRECT-CNTL-WORD-TO MRP
          000262
     136
                              002000
                                                            MOV-
                                                                                                    :CNTL BITS TO LOAD MAR :
:SEND THEM TO MRP
                                                                      #<MAR.LOD>,-(SP)
                                                                                                                                               NS
     137
          000266
                                                            CALL
                                                                      LBMRP
     138
          000272
                    012746
                              000001
                                                                                                     :CLEAR PLR-RT ENABLE BITS
                                                            MOV-
                                                                      #MAREN1.
                                                                                                                                              NS.
     139
          000276
                                                                                                    :AND SET MAREN1 IN CR
:MOVE DATA WORD TO LOD BUS REG
:SEND DATA TO MRP (MAR)
                                                            CALL
                                                                      MRPCR.
                                                                                                                                               ÑS.
     140
          000302
                    016746
                              000000G
                                                            MOV.
                                                                      BINWD, - (SP)
                                                                      LBMRP
     141
          000306
                                                            CALL
         000312
     142
                    000460
                                                            BR
                                                                      STILP
     144
                                                            PIPELINE REG LEFT.
     145
          000314
                                                  STIPL::
     146
                                                                                                    :BIT PATTERN FOR PLR LERF
:DIRECT CNTL WORD TO MRP
:MOVE DATA WORD TO LOD BUS REG
:SEND DATA WWORD TO MRP
     147
          000314
                    012746
                              000202
                                                            MOV:
                                                                      #<PLR.EN+MMLEFT>,-(SP)
          000320
     148
                                                                      MRPCR.
                                                            CALL
     149
          000324
                    016746
                              000000G
                                                            MOV-
                                                                      BINWD,-(SP)
         000330
000334
     150
                                                                      LBMRP
     i5 i
                    000447
                                                                      STILE
     153
                                                            PIPELINE REG RIGHT
     154
     155
          000336
                                                  ST1PR::
          000336
     156
                    012746
                              000200
                                                            MOV-
                                                                      #<PLR.EN>,-(SP)
                                                                                                     ;CHTL WORD FOR PLR RT
          000342
                                                                      MRPCR ·
                                                            CALL
                                                                                                    DIRECT CNTL WORD TO MRP MOVE DATA WORD TO LOD BUS REG
     158
          000346
                    016746
                              000000G
                                                            MCV.
                                                                      BIHWD,-(SP)
     159
          000352
                                                            CALL
                                                                      LBMRP
                                                                                                     :SEND DATA WORD TO MRP
     160
          000356
                    000436
                                                                      ST1LP
                                                            BR
     161
     162
                                                            Q-REG
     163
     164
          000360
                                                  STIQR::
                                                                                                    :BIT-PATTN FOR-PLR-RT-
:DIRECT-CNTL-WORD-TO MRP
     165
          000360
                                                                      #<PLR.EN>,-(SP)
                                                            MGV-
     166
          000364
                                                            CALL
                                                                      MRPCR
                                                                      #RGQ.EN,-(SP)
LBMRP
     167
          000370
                                                                                                     SEND PATTN TO MRP
                    012746
                              000200
                                                            MOV.
          000374
                                                            CALL
     169
         000400
                   012746 000202
     170
                                         Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
```

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MRREST- M
               0 M1110 27-MAR-80 15:13 PAGE 5-3
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                                                                                                       DIRECT CNTL WORD TO MRP.
BIT PATTN TO GENERATE Q-REG RDY.
     171 000404
                                                              GALL
                                                                         MRPCR
                                                                        #RGQ.VAL,-(SP)
     172 - 000410
                    012746
                               020000
                                                              MOV:
                                                                                                       SEND PATTN TO MRP
DATA FOR DESTINATION
SEND TO MRP
     173
                                                              CALL:
          000414
     174
175
176
177
178
179
          000420
                    016746
                               000000G
                                                                        BINUD, - (SP)
          000424
                                                              CALL
          000430
                    000411
                                                                         STILP-
                                                              WORD-LOCATION
     180
          000432
                                                    ST1LW::
     181
          000432
                                                              CALL.
                                                                        LOCIW-
     182 \cdot 000436
                     000406
                                                                        STILP
     183
     184
                                                              SENTENCE - LOCATION -
                                                    :
     185
     186
          000440
                                                    STILS::
     187
          000440
                                                              CALL
                                                                        LOCIS-
          000444
     188
                     000403
                                                                        STILP-
     190
191
                                                              PARAGRAPH LOCATION
          000446
                                                    STILPG::
     193 000446
194 000452
                    000400
                                                              BR
                                                                         STILP
     196
     197 000454
198 000454
199 000462
                                                    ST1LP:
                     032767
001402
                               000000G - 000000G
                                                              BIT.
                                                                         #LOOP, BASE
                                                                                                        :LOOP ON COMMAND
                                                                         STIX
                                                                                                        ;NO, EXIT.
;EXECUTE ROUTINE AGAIN:
                                                              BEQ
     200 000464
201
202 000470
                                                                         STIIH.
          000464
                     000167
                               177516
                                                              JMP.
                                                    STIX:
     203 000470
                                                              CALL
JMP·
                                                                         KILL
                                                                                                        ;KILL-AST-(IF-THERE-WAS-ONE)
          000474
                     000167
                               000000G
                                                                         MRPXX
```

```
MRREST - MACRO N 110 27+MAR-80 15:13 PAGE 6 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     206
     207
     208
                                                                 READ.
     209
     209
210
211
212
213
214
215
200
216
200
217
200
200
200
200
201
201
202
202
203
                                                                 PERFORM. THIRD. LEVEL . PARSING.
                                                                 EG. IN THE COMMAND:
MR>RE CR
PARSE THE CR
                                                      RE1::
                                                                                                            :FIND A REGISTER MNEMONIC IN COMMAND LINE
:OK, CONTINUE
:NOTHING THERE
:RETURN TO MRP (PROMPT)
                                                                 CALL
                                                                            FIND
                      193994
                                                                 BCC
                                                                 CALL
                                                                            FRR4
                     000167
                                000376
                                                                 JMP.
                                                                            RE1X
                                                                 MATCH THE REGISTER MNEMONIC FROM THE COMMAND LINE AGAINST
                                                                 THE TABLE OF VALID MNEMONICS.
     223
           000516
                     012700
                                000004
                                                      1$:
                                                                 MOV
                                                                            #RE1LN,R0
                                                                                                            ;NUMBER OF TABLE ENTRIES : R2 -> TABLE ---
     225
           000522
                     012702
                                000056
                                                                 MOŸ
                                                                            #RE1TBL,R2
                                                                                                                                              . . .
     226
           000526
                                                                 CALL
                                                                            SCAN
                                                                                                            :MATCH AGAINST COMMAND LINE
     227
           000532
                      103004
                                                                            2$
                                                                                                            OK, CONTINUE
           000534
                                                                 CALL
                                                                            ERR6
     229 000540
                      000167
                                000350
                                                                 JMP .
                                                                            \mathsf{RE} \, \mathsf{I} \times
     238
     231
                                                                 SAVE-THE-POINTER-TO-THE-ROUTINE-ASSOCIATED WITH-THE-REGISTER, R1 -> ROUTINE-ADDRESS.
CALL-ROUTINE TO-SCAN-THE-COMMAND LINE-FOR-LOOP-INDICATOR
     232
     234
235
                                                                 EG. MR>RE-CR L-
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT.
JUMP-TO-ROUTINE-TO-READ-REGISTER.
     236
                     010167
     238
          000544
                                000000G
                                                      2$;
                                                                 MOV.
                                                                           R1.RTHPT
                                                                                                            ;SAVE · POINTER · TO · RTN
     239
          000550
                                                                 CALL.
                                                                           LOOPR.
                                                                                                            :L00P?
     240
          000554
                      016701
                                                                                                            ; POINT: TO: ROUTINE:
; EXECUTE: ROUTINE:
                                000000G
                                                      RE1IN:
                                                                 MOV-
                                                                            RTHPT, R1
     241
          000560
                     000171
                                000000
                                                                 JMP -
                                                                            @(R1)
     242
243
     244
                                                                 MEMORY - ADDRESS - REG
     245
     246
          000564
                                                      REIMA::
     247
          000564
                     012746
                                000040
                                                                 MOV-
                                                                            #MAR.OUT,-(SP)
     248
          000570
                                                                 CALL
                                                                            MRPCR
                                                                                                            ;DIRECT-CNTL-WORD-TO MRP
;GET-WORD-FROM-MRP-
     249
          000574
                                                                 CALL
                                                                            MRPLB -
     250
          000600
                     005046
                                                                 CLR.
                                                                            -(SP)
                                                                                                            ; CLEAR · THE · CONTROL · REG
     25 i
          000602
                                                                 CALL
                                                                            MRPCR -
          000606
                     012601
                                                                 MOV.
                                                                            (SP) + .R1
                                                                                                            :WORD RETURNED ON STACK
     253 000610
254
                                                                            REIPUT:
     255
                                                                 MICROPGM-ADDRESS-REG
     256
257
          000612
                                                      REIMP::
     258 000612
                     012746
                                000100
                                                                 MOV.
                                                                            #MMADRD,-(SP)
          000616
     259
                                                                 CALL
                                                                           MRPCR -
                                                                                                            GET NURD FROM TRP
     260 000622
                                                                 CALL
                                                                           MRPLB
     261 000626
                                                                            -(SP)
MRPCR
                                                                 CLR
     262.000630
                                                                 CALL
```

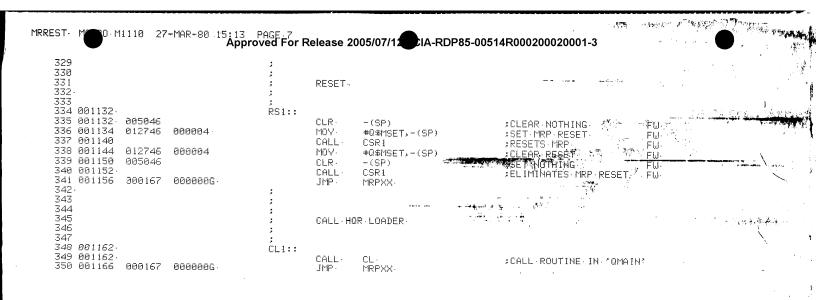
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MRREST- M
               O M1110 27-MAR-80 15:13 PAGE 6-1
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                                                            MOV.
     263 000634
                                                                                                    :WORD · RETURNED · ON · STACK
     264
         000636
                    042701
                              177400
                                                            BIC
                                                                       #177400.R1
                                                                                                    :MASK · OFF · UNNECESSARY · BITS ·
                                                                      REIPUT-
     265
         000642
                    000501
     266
     267
                                                  ż
                                                            UNIBUS STATUS REG
     268
269
         000644
                                                  RE1SW::
         000644
     270
                              000202
                    012746
                                                            MOV-
                                                                      #<PLR.EN+MMLEFT>,-(SP)
                                                                                                    ;PL·LEFT·
     271
          000650
                                                            CALL
                                                                      MRPCR -
                                                                                                     :DIRECT CHTL WORD TO MRP NS
     272
         000654
                    005046
                                                             CLR
                                                                       -(SP)
                                                                                                     ;DATA · WORD
     273
          000656
                                                                                                     SEND WORD TO MRP
                                                            CALL
                                                                      1 BMRP
                                                                      #<PLR.EN>,-(SP)
     274 000662
                    012746
                                                            MOV.
                                                                                                    :PL-RIGHT: NS
:DIRECT-CNTL-WORD-TO MRP
:MASTER-SYNC-
         000666
000672
     275
                                                             CALL
                                                                      MRPCR
     276
                    012746
                              ававава
                                                            MOV-
                                                                       #<UBD.IN+MSYN>,-(SP)
          000676
                                                                                                    SEND WORD TO MRP
READ STATUS WORD FROM MRP
CLEAR PLR.EN BIT
                                                            CALL
                                                                      LBMRP
     278
          000702
                                                             CALL
                                                                      MRPLB
     279
          000706
000712
                    012746
                              000200
                                                            MOV.
                                                                       #<PLR.EN>,-(SP)
     280
                                                            CALL
                                                                      MRPCR.
     281
          00071€
                    005046
                                                                                                     CLEAR PLR-RT
SEND WORD TO MRP
CLEAR THE CR
                                                            CLR
                                                                       -(SP)
          000720
     282
                                                            CALL.
                                                                      LBMRP
                                                                                                                                        NS
     283
          000724
                    005046
                                                            CLR.
                                                                       -(SP)
     284 000726
                                                             CALL
                                                                      MRPCR.
     285 000732
                                                                      (SP)+,R1
RE1PUT
                                                                                                     :WORD-RETURNED-ON-STACK
:AND-PRINT
                    012601
                                                            MOV-
          000734
     286
                    000444
                                                            BR
     287
     288
                                                            UNIBUS DATA WORD
     289
     290
          000736
                                                  REIDW::
          000736
000742
                                                                                                    :SET.CR.FOR.PL LEFT
:DIRECT.CNTL.WORD.TO MRP.
     291
                    012746
                              000202
                                                            MOV
                                                                       #KPLR.EN+MMLEFT>,-(SP)
                                                                                                                                      NS
     292
                                                            CALL
                                                                      MRPCR -
     293
          000746
                              010000
                                                                                                    SET DATA WORD ADDRESS BIT NS
SEND WORD TO MRP.PLR-LEFT NS
SET CR.FOR PL RIGHT NS
DIRECT CNTL WORD TO MRP
                                                            MOV:
                                                                       #A01, -(SP)
     294
          000752
                                                            CALL
                                                                      LBMRP
          000756
     295
                    012746
                              000200
                                                            MOV-
                                                                       #<PLR.EN>,-(SP)
     296
          000762
                                                            CALL
                                                                      MRPCR
          000766
                    012746
                              000060
                                                            MOV.
                                                                       #<UBD.IN+MSYN>.-(SP)
                                                                                                     :SET MASTER SYNC, UBD. IN IN PLR RT
:SEND WORD TO MRP
:READ DATA WORD FROM MRP NS
                                                                                                                                                       NS
          000772
000776
     298
                                                            CALL
                                                                       LBMRP
     299
                                                             CALL
                                                                                                                                             NS.
     300
          001002
                    012746
                              000200
                                                            MOV
                                                                       #<PLR.EN>, -(SP)
                                                                                                     :CLEAR PLR.EN BIT
                                                                                                                                  MS= = #
     30 i
          001006
                                                            CALL
                                                                       MRPCR -
     302-001012
                    005046
                                                                                                     ;CLEAR·PLR-RT·
          001014
                                                                                                     ;SEND-WORD TO-MRP. -
;PL-LEFT-
                                                            CALL
                                                                       LBMRP
     304
          001020
                    012746
                                                             MOV
                                                                       #<MMLEFT+PLR.EN>,-(SP)
                                                                                                                                    NS
     305
          001024
                                                            CALL
                                                                       MRPCR
                                                                                                     ;DIRECT:CNTL:WORD:TO MRP
                                                                                                                                                 NS
          001030
                    005046
                                                            CLR
                                                                       (SP)
                                                                                                     CLEAR PLR-LT
     307
          001032
                                                            CALL
                                                                       LBMRP
     308
          001036
                    005046
                                                            CLR
                                                                       -(SP)
                                                                                                     CLEAR MRP CR
     309
          001040
                                                                      MRPCR.
                                                            CALL
     310 001044
                    012601
                                                                       (SP)+,R1
                                                            MOV
                                                                                                     :WORD · RETURNED · ON · STACK
     311
312
313
          001046
                              000000G-000000G-RE1PUT:
                    032767
                                                            BIT
                                                                       #ONCE,BASE
                                                                                                     :PRINTED:ONCE:?
                                                                                                                                     ज भू
     314
          001054
                    001011
                                                            BNE
                                                                                                     :YES, SKICP:
:SET-FLAG-FOR-PRITIED ONCE
                                                                       1$
     315 001056
                    052767
                              000000G-000000G
                                                                       #ONCE, BASE
     316
                                                                                                     :POINT-TO-PRINT-LINE
:CONVERT-VALUE-IN-R1 FOR-PRINTING
         001064
                    012705
                              000000G
                                                            MOV.
                                                                       #PRINT, R5
     317
          001070
                                                            CALL
                                                                      UNPK
     318
                                                                      CONSOL -
                                                            CALL
                                                                                                     : PRINT ON CONSOLE
     319
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320 001100 321 001106 322 001110 323 324 001114 325 001114 326 001122 327 001126 032767 001402 000167 000000G-000000G-1\$: BIT. #LOOP,BASE. RE1X RE1IN. ;REPEAT: ;NO, EXIT: ;EXECUTE:ROUTINE:AGAIN: BEQ. 177440 RE1X: 000000G-000000G-BIC. CALL. JMP. #ONCE, BASE 042767 ;CLEAR PRINT CONTROL FLAG ;KILL AST 000167 000000G MRPXX.



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352 353 354 STORE INTO LOCATION WORDS 355 356 357 001172 005267 LOCIS: INC. 176646 LOCURD. :PARAGRAPH 358 001176 005267 LOCWRD. :SENTENCE 359 001202 360 001202 LOC1W:: :WORD 012746 #<PLR.EN>,-(SP) 000200 MOV-SET BIT-PATTN FOR-PLR-RT DIRECT-CNTL-WORD-TO MRP-SET-BIT-PATTN-FOR-LOC-ENABLE 361 001206 CALL MOV-MRPCR -#LOC.EN,-(SP) LBMRP 362.001212. 363 001216 364 012746 000100 CALL :SEND-WORD TO-MRP #SET-BIT-PATTN-FOR-PLR-LEFT #DIRECT-CNTL-WORD-TO MRP## DETERMINE-WHICH-LOCATION## WORD-TO SEND-TO## THE-MRP 365 001222 012746 000202 MOV. #<PLR.EN+MMLEFT>,-(SP) 366 001226 367 001232 CALL MRPCR -016700 176606 MOV-LOCURD, RØ 368 001236 006300 RØ LOCTBL(RØ),-(SP) LBMRP ASL MOV 369 001240 370 001244 016046 CALL :SEND-LOC-WORD-372-001250 373 001252 374 001256 CLR-005046 ; DISABLE PIPELIN REGISTER F.W. 8/31 -(SP)CALL MRPCR . 016746 000000G MOV. CALL BINWD,-(SP) :MOVE-USER VALUE-TO-LOD-BUS-:SEND-VALUE-TO-MRP-:RESET-375 001262 376 001266 377 001272 378 LBMRP 005067 176552 CLR LOCURD RETURN 379 000001 .END

MRREST- MORO M1110 27-MAR-80 15:13 PAGE 8-1 SYMBOL TA Approved For Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 ALUCKE = . 040000 BYTE40 = .000050 BYTE41 = .000051 BYTE92=-000134 MMLEFT= . 000002 Q\$MRP.=.000040 ALUOE = 004000 A01 = 010000 BASE = ********** BYTE93 = 000135 BYTE94 = 000136 MMOE = 000004 MMURTE = 000010 MNOBRE = 100000 Q\$MRP2=-000240 Q\$MSC-=-040000 BYTE42= 000052 BYTE43= 000053 BYTE95= 000137 Q\$MSET= 000004 BINUD = ********* BYTE96= 000140 BYTE97= 000141 MREN1 = 000001 MREN2 = 020000 BYTE44= : 000054 Q\$MSP·= 100000 Q\$NCLK= 176000 Q\$PP = 000100 BITYAL = 000000 BYTE45 = . 000055 BIT0 = 0000001 BIT1 = 000002 BYTE46 = 000056 BYTE98 = 000142 MRPCR · = · ****** GX · MRPLB · = · ****** GX · BYTE47= 000057 BYTE48= 000060 BYTE99= 000143 Q\$PPSW= 000320 BIT10 = 002000 BYTVAL = . 000144 CBKALL = . 001000 MRPXX = ******* GX Q\$PP2. = . 000300 BIT11 = 004000 BYTE49= 000061 Q\$QHLT= 000013 Q\$QL = 000043 MSYN - 000040 BIT12 -- 010000 BIT13 -- 020000 BIT14 -- 040000 BYTE5 = 000005 CBKCLK= 000400 N· = 000144 ONCE = ********** GX-PACK = ********* GX-BYTE50= 000062 BYTE51= 000063 CL CL1 =·********* GX Q\$QLA:=:000053 Q\$QLB:=:000054 002 PACK 001162RG BIT15 = 100000 BIT2 = 000004 BIT3 = 000010 BYTE52 = 000064 CHOBRE = . 100000 = · 000010 = · 000020 = · 000030 Q\$QLR · = · 000001 PLB. BYTE53= 000065 CONSOL = · ***** GX PLC. Q\$QW = 0000042 BYTE54= 000066 CPCCEN= 010000 PLD. Q\$RDCD= 000005 = · 000026 = · 000040 BYTE55= · 000067 CPREAD= : 040000 CPWRTE= : 020000 PLRWR - = . 000200 Q\$RDMD= 000006 BITS BYTE56= 000070 PLR.EN=-000200 PRINT-=-******* GX-QR\$CR1=-176420 Q\$REBK= 001000 = 000100 BIT6 BYTE57= 000071 BYTE58= 000072 CSADRD=-000004 Q\$RNC -- 006000 Q\$RSC -- 004000 = 000200 = 000400 CSEQCI= 100000 CSOE = 000040 CSR1 = ******** GX-BYTE59= 000073 BIT8. QR\$CR2= 176422 QR\$LBR= 176424 Q\$RSET= 000010 = 001000 BIT9 BYTE6 = 000006 BYTE60= 000074 Q\$SM = 100000 Q\$SP = 000120 = . 000000 CSWRTE = 000100 DBR.RD = 000001 Q\$ATTN= .000100 BYTE: - 000001 BYTE:0- 000012 BYTE61= 0000075 Q\$BCL -- 000001 Q\$CCCP- 000040 Q\$SP2·=·000340 BYTE62=-000076 BYTE63=-000077 BYTE64=-000100 DB\$CPP=:001457 RE i 000500RG BYTE11= 000013 DB\$SPT= 000026 Q\$CHB · = · 000400 RE LDIJ. 000736RG 000554R 002 BYTE12= 000014 DB\$TPC= 000023 Q\$CHRL= 000200 RE1IN-002 BYTE13= 000015 BYTE14= 000016 BYTE15= 000017 BYTE65= 000101 DISPGS= 100000 Q\$CLR·=·000040 Q\$CNC·=·030000 Q\$CP·=·000060 RE1LN = 000004 G BYTE66=-000102 DMAAUR = . 000005 RE1MA 000564RG BYTE67 = . 000103 DMARRD= .000003 RE1MP 000612RG 0,02 BYTE16=-000020 BYTE68= 000104 DMARWR= 000004 Q\$CPCC= 000010 RE1PUT-001046R 002 BYTE17= 000021 BYTE69= 000105 BYTE7 = 000007 ENBR = 010000 Q\$CP2. = .000260 Q\$CSC. = .010000 RE1SW-000644RG **.**002 BYTE18= 0000022 ERR4 = · ****** GX REITBL 000056RG BYTE70= 000106 BYTE71= 000107 002 BYTE19= 000023 ERR5 = · ****** GX · Q\$CSEL=.000360 001114R _ RE1X BYTE2 - = . 000002 ERR6 = ********* GX.
FIND = ******* GX.
KILL = ****** GX.
LBMRP = ****** GX. RGQ.EN= 000200 Q\$CSET= 0000002 BYTE20= 000024 BYTE21= 000025 BYTE22= 000026 BYTE72= 000110 Q\$CSP·=·020000 Q\$DMA·=·000001 Q\$ENBK=·040000 RGO.VA= 020000 BYTE73= 000111 001132RG 002 BYTE74=-000112 BYTE75=-000113 RTNPT = ******* GX*
SCAN = ******* BYTE23=-000027 002 Q\$ENOP= 020000 LOCTBL: 000046R BYTE24= 000030 BYTE25= 000031 BYTE76= 000114 999944R 002 · Q\$FAL · = · 004000 Q\$FC · = · 000045 SEQ.CI= 000010 BYTE77=-000115 BYTE78=-000116 LOC.EN= 000100 ST1 ST1BK 000076RG 002. BYTE26=-000032 Q\$FO = 000044 Q\$FP = 000046 LOC:WA= 040000 LOC:WB= 100000 000230RG 992 BYTE27= 000033 BYTE28= 000034 BYTE79= 000117 002 000216RG 002 · Q\$HBF · = · 000006 002 · Q\$ICP · = · 000006 BYTE8 = 000010 LOC1P-001172RG STIIN-000206R BYTE29 = 0000035 BYTE80= 0000120 LOCIS: 001176RG: :LOCIW: 001202RG: LOOP: =: ******* GX STILN-000011 G 802 - Q\$1CP - - 000006 002 - Q\$1HB - - 000002 Q\$1HRL - 000002 Q\$1MRP - 000007 Q\$LBD - - 001000 Q\$LBD - - 001000 Q\$LBP - - 000001 BYTE3 = 000003 BYTE81= 000121 ST1LP 000454R 002 BYTE30=-000036 BYTE31=-000037 BYTE32=-000040 BYTE82= 000122 STILPG 000446RG 002 BYTE83= 000123 LOOPR·=·************* GX STHIS: 000440RG 992 MAREN1= 000001 MAREN2= 004000 BYTE84= 000124 STILW. 000432RG 992 BYTE33= .000041 BYTE85= 000125 000252RG STIMA 002 8YTE34= 000042 8YTE35= 000043 BYTE06=-000126 MARLOD= 010000 000314RG 000336RG STIPL MAROUT= 000002 MAR.LO= 002000 MAR.OU= 000040 BYTE87 = . 000127 Q\$LDCD= 000003 1862 : 47 STIPR BYTE36= 000044 BYTE37= 000045 BYTE08 - . 000130 Q\$LDMD = · 000004 STIQR BYTE89= 000131 Q\$LDPP=:002000 000000RG ST1TBL 002 BYTE38= 000046 MBKALL= 001000 MBKCLK= 000400 MMADRD= 000100 BYTE9 = 000011 Q\$LHP·=·010000 STIX 000470R 882 BYTE39= 000047 BYTE90= 000132 Q\$MNC -- 140000 Q\$MR -- 000052 S\$CLR∙ BYTE4 = 000004 MMADRD = 000100 USDIK = 000022 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 BYTE91=-000133 = 000001

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SYMBOL . TABLE
                                      T$FSB2=-000010
T$IB- =-000026
T$IBAR=-000024
S$08-----
                                                                             WORD14= 000034
                                                                                                                   WORD44=-000130
                                                                                                                                                          WORD73=-000222
                                                                             WORD15=-000036
WORD15=-000036
WORD16=-000040
5$QR - - 000006
                                                                                                                   WORD45=-000132-
WORD46=-000134
                                                                                                                                                          WORD74= 000224
                                                                                                                                                          WORD75= 000226
WORD76= 000230
                                      T$IBE - - 020000
T$IBF - - 040000
S$SR - - 000007
                                                                             WORD17= 000042
                                                                                                                   WORD47=-000136
                                                                                                                                                         WORD76= 000230

WORD77= 000232

WORD78= 000236

WORD79= 000020
                                                                             WORD18=-000044
WORD19=-000046
WORD2---000004
5#S1 = 0000010
                                                                                                                   WORD48 = . 000140
        = 000014
                                      T$ICD - = - 000040
3$52
                                                                                                                   WORD49= 000142
WORD5 = 000012
TD$CTR= 176370
TD$CTW= 176360
TD$INL= 004000
                                      T$MODE = 004000
T$OB · = 000036
T$OBE · = 004000
                                                                             WORD20= 000050
                                                                                                                   WORD50 = . 000144
                                                                             WORD21=-000052-
WORD22=-000054
WORD23=-000056
                                                                                                                   WORD51= 000146
                                                                                                                                                          WORD80= 000240
                                      T$0BF · = · 010000
TD$MEM= 000270
                                                                                                                   WORD52=-000150
WORD53=-000152
                                                                                                                                                          WORD81 = .000242
TD$0AR= 176344
                                      T$0BRA= 000034
                                                                                                                                                         WORD82 = 000244
WORD83 = 000246
TD$0TR= 176346
TD$QRD= 000274
                                      T$0BWA=-000032
                                                                             WORD24= 000060
                                                                                                                   WORD54= 000154
                                      T$0UTA= 100000
T$RBD0= 000200
                                                                                                                   WORD55=-000156
WORD56=-000160
WORD57=-000162
                                                                             WORD25=-000062
WORD26=-000064
                                                                                                                                                          WORD84= 000250
TD$SU- = 176376
                                                                                                                                                         WORD85=-000252
WORD86=-000254
WORD87=-000256
                                      T$RBD0=:000200
T$RNB:=:000040
T$RSET=:040000
T$SC:=:000022
T$SCLK=:020000
TD$TAR=-176372
                                                                             WORD27 = . 000066
                                                                             WORD28=-000070
WORD29=-000072-
WORD3 =-000006
TD$TAW= 176362
TD$TDR= 176374
                                                                                                                   WORD58= 000164
                                                                                                                   WORD59= 000166
WORD6 = 000014
                                                                                                                                                         WORD88= 000260
TD$TDW= 176364
T$AD - = 000020
T$BA - = 000002
                                                                                                                                                         WORD89 = 000262*
WORD9 = 000282;
                                      T$SEG1=-000000
T$SEG2=-000001
                                                                             WORD30= 000074
                                                                                                                   WORD60= 000170
                                                                             WORD31=-000076
WORD32=-000100
                                                                                                                   WORD61=-000172-
WORD62=-000174
WORD63=-000176
                                                                                                                                                          WORD90= 000264
T$BD· = 000010
                                       T$SEG3= 0000002
                                                                                                                                                         WORD91 = -000266
T$BSO·=·100000
T$BT·=·000020
                                       T$SO· = 0000001
                                                                             WORD33= 000102
                                                                                                                                                         WORD92= 000270
WORD93= 000272
                                      T$UBUS=-100000
T$1CLK=-000400
                                                                             WORD34= 000104
                                                                                                                   WORD64= 000200
T$BTAR = . 000030
                                                                             WORD35=-000106
WORD36=-000110
                                                                                                                   WORD65--000202
                                                                                                                                                         WORD94= 000274
T$BTD - = 002000
T$CD - = 000100
T$CLK - = 002000
                                       T$8BEN= 000020
                                                                                                                   WORD66= 000204
WORD67= 000206
                                                                                                                                                         WORD95= 000276
                                      UBD.IN= 000020
                                                                             WORD37= 000112
                                                                                                                                                         WORD96 = 000300
WORD97 = 000302
                                      UNPK: =: ***** GX: WORD0 =: 000000 WORD1 =: 000002:
                                                                             WORD38= 000114
                                                                                                                   WORD68 = . 000210
T$DISK=-000200
T$DRD-=-000004
                                                                             WORD39=-000116
                                                                                                                   WORD69= 000212
                                                                                                                                                         ₩ORD98= 000304
                                                                             WORD4 = 000010
                                                                                                                   WORD7 = 000016
                                                                                                                                                          WORD99≕ 000306
T$EMEM= 010000
                                                                             WORD40= 0000120
                                      WORD10=-000024
                                                                                                                   WORD70=.000214
                                                                                                                                                         WRDVAL = 000310
XTREAD = 001000
                                      WORD:1=-000026
WORD:2=-000030
WORD:3=-000032-
T$FSAA=:0000000
                                                                             WORD41=.000122
                                                                                                                   WORD71= 000216
T$FSAB= 000004
                                                                             WORD42= 000124
                                                                                                                   WORD72= 000220
                                                                                                                                                         XTWRTE = . 000400
T$FSAC= 0000014
                                                                             WORD43=-000126
             000000
                              001
MRREST.
            001274
                              002
ERRORS · DETECTED:
VIRTUAL MEMORY JSED: 3285 WORDS (13 PAGES)
DYNAMIC MEMORY: 3860 WORDS (14 PAGES)
ELAPSED TIME: 00:00:47
MRREST, MRREST/-SP=C20,1]IM, C20,1]MRREST
```

MRREST- MACRO M1110 27-MAR-80 15:13 PAGE 8-2

```
MACRO-M1110 27-MAR-80 15:09 PAGE-5
MRBUG-
                                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                                        .FITLE. MRBUG-
           23
              000000
                                                                                        .PSECT: MRBUG
           4567
                                                                                       HARDWARE-QUERY-RESOLVER-'MANUAL' DEBUGGING AIDS-MATCH-REPORT PROCESSOR TEST-ROUTINES-
                                                                                       DEBUGGING COMMANDS
                                                                                       COMMANDS:
         10
                                                                                                     SET-BREAKPOINT
REMOVE-BREAKPOINT-
SINGLE-STEP-
                                                                                       ΑT
                                                                                       OF
         12
13
                                                                                                     PROCEED · FROM · BREAKPOINT ·
                                                                                       ONCE . A . COMMAND . HAS . BEEN . EXECUTED . (OR . AN . ERROR . ENCOUNTERED) THIS . MODULE . RETURNS . CONTROL . TO . THE . MODULE . MRP . AT . LOCATION .
         16
17
          18
                                                                                                                                                                           g apr Record
          19
         20
21
22
                                                                            ****************
                                                                                      DISCLAIMER:
IN ORDER FOR THE BREAKPOINT ROUTINES TO WORK PROPERLY.
THERE MUST BE A PIPELINE REGISTER ONLY CLOCK, THIS
WOULD ALLOW THE CHANGING OF PLR CONTENTS WITHOUT CAUSING
AN INSTRUCTION TO BE EXECUTED. AS IT STANDS NOW, THE PIPE-
LIME REGISTER CLOCK IS TIED TO THE SEQUENCER CLOCK, WHEN
A BREAKPOINT HAS BEEN REACHED, ANY OPERATION INVOLVING
A PLR CLOCK (EG. PRINTING MICROSOM MEMORY) WILL EXECUTE
THE INSTRUCTION IN THE PLR. THE 2500 SEQUENCER STACK IS
ALSO SOMETIMES CHANGED.
                                                                                                                                                        - Harris A
         23
         24
25
         26
         27
28
         29
         31
32
33
34
35
36
37
38
39
                                                                            **************
                                                                                        .MCALL · CLEF$S,WTLO$S,RDAF$S,WTSE$S
                                                                                       SET-BREAKPOINT-
         40
                                                                                       EG. MR>AT-22
         42
              000000
         43
              000000
000004
                                                                                       CALL
                                                                                                      FIHD
                                                                                                                                                 *LOOK FOR BKPT ADDRESS IN COMMAND LINE *OK CONVERT BKPT ADDRESS
         44
                             103004
                                                                                       BCC
                                                                                                      15
         45
              000006
                                                                                       CALL
                                                                                                     ERR4
                                                                                                                                                 : NOTHING - THERE -
         46
              000012
                             000167
                                           000000G
                                                                                        JMP
                                                                                                      MRPXX.
         47
                                                                                                                                                 :CONVERT.BKPT.ADDRESS:OK, CONTINUE:
:ERROR.ON.CONVERSION
              000016
                                                                        1$:
                                                                                       CALL
                                                                                                     PACK
         48
              000022
                             103004
                                                                                       BCC.
                                                                                                      2$
         49
               000024
                                                                                                      ERR5
                                                                                       CALL
                             000167
026767
         5й
              000030
                                           000000G
                                                                                                     MRPXX
                                                                                                                                                 :IS ADDRESS IN RANGE
:YES, CONTINUE
:ADDR OUT OF RANGE
         51
                                           000000G.000000G.2$:
              000034
                                                                                       CMP
                                                                                                      MMHIGH, BINWD
              000042
                             003004
                                                                                       BGT.
                                                                                                      34
         53
54
              000044
                                                                                       CALL
                                                                                                     ERR10
              000050
                             000167
                                           000000G
                                                                                       JMP .
                                                                                                     MRPXX.
                                                                                                                                               TOWN TO THE TANK
              000054
                                                                                                     #MBKCLKEN,-(SP)
                                                                                                                      SET MRP CHTL FOR BREAKPOINT : DIRECT CHTL WORD TO MRP : DIA-RDP85-00514R000200020001-3
                                           000400
                                                                        3$:
                                                                                       MOV-
              000060
                                                                                       CALL
                                                           Approved For Release 2005/07/12
```

```
MARCO M1110 27-MAR-80 15:09 PAGE 5-1
                                                                        Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
  58
59
         000064
                                                 000000G-----
                                                                                                             MOV.
                                                                                                                                  BINWD.-(SP)
                                                                                                                                                                                              :LOAD-BKPT ADDR-INTO LOAD-BUS-REG
:LOAD-MRP-BKPT-REG-
         000070
                                                                                                              CALL
                                                                                                                                  LBMRP
          000074
                             052767
                                                 000000G · 000000G ·
                                                                                                                                  #BREAK, BASE
                                                                                                             BIS.
                                                                                                                                                                                              :SET-FLAG-FOR-BKPT-SET
  61
                             000167
                                                                                                                                  MRPXX.
  62
  63
  64
                                                                                                             REMOVE · BREAKPOINT · (DISABLE)
  65
66
                                                                                                             MR>0F
  67
          000106
                                                                                          OF 1::
  69
          000106
                                                                                                             CLR-
                                                                                                                                  -(SP)
                                                                                                                                                                                              #SEND-0 TO MRP-CONTROL-REG-
#EXECUTE-TRANSFER-
#CLEAR-CSR 2-
  70
          000110
                                                                                                              CALL
                                                                                                                                  MRPCR
          000114
                              005067
                                                  176422
                                                                                                             CLR.
BIC.
                                                                                                                                  ORSOR2.
  72
73
74
75
76
77
79
80
          000120
                              042767
                                                  000000G 000000G
                                                                                                                                  #BREAK, BASE
                                                                                                                                                                                              :CLEAR · BREAKPOINT · SET · FLAG ·
          000126
                              000167
                                                  000000G
                                                                                                               JMP
                                                                                                                                  MRPXX.
                                                                                                              SINGLE - STEP -
                                                                                                             EG. MR>SS
                                                                                                                       MR>SS-22
  81
          000132
                                                                                          SS1::
          000132
                                                                                                             CALL
                                                                                                                                  FIND
                                                                                                                                                                                              :LOOK · FOR · ADDR · IN · COMMAND · L INE
  83
          000136
                              103426
                                                                                                             BCS.
                                                                                                                                                                                              #NONE THERE USE CURRENT MAR
#CONVERT START ADDRESS
#OK CONTINUE
                                                                                                                                  3$
  84
          000140
                                                                                                              CALL
                                                                                                                                  PACK
  85
          000144
                              103004
                                                                                                             BCC+
CALL
                                                                                                                                  1$
          000146
                                                                                                                                  ÉRR5
                                                                                                                                                                                              :ERROR · ON · CONVERSION
  87
          000152
                              000167
                                                 000000G
                                                                                                                                  MRPXX.
  88
          000156
                              026767
                                                 000000G-000000G-1$:
                                                                                                              CMP
                                                                                                                                                                                              :IS-ADDRESS-IN-RANGE
:YES, CONTINUE-
:OUT-OF-RANGE-HIGH-
                                                                                                                                 MMHIGH, BINWD
  90
         000164
                              003004
                                                                                                              BGT.
                                                                                                                                  2$
  91
92
          000166
                                                                                                              CALL
                                                                                                                                  ERR10
                              000167
                                                 000000G
          000172
                                                                                                              JMP.
                                                                                                                                  MRPXX:
  93
  94
95
                                                                                                              SEQUENCE UP TO SINGLE STEP ADDRESS (IF NECESSARY) SET SEARCH MODE
  96
                                                                                                              SINGLE CLOCK ALL TO EXECUTE ONE INSTRUCTION.
                                                                                                              SET-LOAD-MODE-
  98
                                                                                                                                                                                              :PROVIDE START ADDRESS FOR SEQUENCER
:SEQUENCE ONLY UP TO START ADDRESS
  99
          000176
                             016746
                                                 000000G
                                                                                          2$:
                                                                                                              MOV:
                                                                                                                                  BINWD,-(SP)
100
          000202
                                                                                                             CALL:
                                                                                                                                  SEQMM.
          000206
                              005046
                                                                                                             CLR:
                                                                                                                                  \sim (SP)
                                                                                                                                                                                              :REINHIBIT BRANCH CONTROL REG
          000210
                                                                                                             CALL
                                                                                                                                  MRPCR
103:000214:4
                                                                                          3$:
104 000214
                             012746
                                                 001777
                                                                                                             MOV-
                                                                                                                                                                                              :SET-CP-MICROCODE-TO INNOCUOUS LOC-(X:3FF:)
         000220
 105
                                                                                                                                  SEQCS
-(SP)
                                                                                                             CALL
CLR
106
107
          000224
                              005046
                                                                                                                                                                                              :REINHIBIT BR CONTROL REG
          000226
108
109
          000232
                             012767
                                                  100000
                                                                     176422
                                                                                                             MOV.
                                                                                                                                  #Q$SM,QR$CR2
#<Q$MNC+Q$RNC>,-(SP)
                                                                                                                                                                                             :CLEAR.MRP AND.PRS.CO-COCKS.

:CLEAR.MRP AND.PRS.CO-COCKS.

:CLEAR.MRP AND.PRS.

:CLEAR.MRP A
                                                                                                                                                                                              :SET-SEARCH-MODE
110 000240
                             012746
                                                  146000
                                                                                                              MOV
111 000244
                             852716
                                                                                                             BIS MOV
                                                 001001
                                                                                                                                  #<Q$LBD+Q$LBP>,(SP)
                             012746
112-000250
                                                  100000
                                                                                                                                  #Q$MSP,~(SP)
113 000254
                                                                       CALL CSR1 : MOVE TO CSR1
CLR - (SP) : CLEAR NOTHING
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                                                              CALL
                                                                                                                                  CSR1
                             905046
114 000260
```

MRBUG-

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MRBUG-
        MACRO M1110 27-MAR-80 15:09 PAGE 5-2
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    115 000262 012746
                             146000
                                                          MOV-
                                                                    #<Q$MNC+Q$RNC>,-(SP)
                                                                                                  :SET-MRP-AND-PPS-NO-CLOCKS
    116
117
         000266
                                                           CALL
                                                                    CSR1
                                                                                                  :AND REWRITE CSR1
     118
         000272 005067
                             176422
                                                           CLR -
                                                                    QR$CR2
                                                                                                 :SET-LOAD-MODE.
:PRINT-MICROPGM-ADDRESS
    119 000276
                                                           CALL
                                                                    MRPMP
     120 000302
                   000167
                             000000G
                                                           JMP.
                                                                    MRPXX
     121
     123
                                                          PROCEED.
EG. MR>GO.
     124
     125
                                                               MR>G0 - 22
     126
    127
128-000306
                                                 GO1::
         000306
     129
                                                          CALL.
                                                                    FIND
                                                                                                 :LOOK:FOR:START-ADDRESS:
:NONE, GO:FROM:PRESENT-ADDRESS
:CONVERT:START-ADDRESS:
:OK, CONTINUE: #
         000312
                   103431
                                                          BCS
                                                                    MGO -
     131
         000314
                                                          CALL
                                                                    PACK
     132-000320
                   103004
                                                          BCC.
                                                                    1$
     133
         000322
                                                                    ERR5
                                                           CALL
                                                                                                 :ERROR ON CONVERSION
         000326
                   000167
                            000000G
                                                           JMP .
     135
    136
         000332
                   026767
                             000000G 000000G 1$:
                                                                    MMHIGH.BIHWD
                                                          CMF .
                                                                                                 :IS-START-ADDRESS-IN RANGE:
:YES: CONTINUE:
:OUT-OF-RANGE-HIGH-
         000340
                   003004
                                                          BGT.
     138
         000342
                                                                    ERR10
                                                          CALL
JMP
     139
         000346
                   000167
                                                                    MRPXX
     140
     141
         000352
                   016746
                                                                                                 :PROVIDE START ADDRESS FOR SEQUENCER:SEQUENCE ONLY UP TO START ADDRESS
                             000000G
                                                2$:
                                                          MOV.
                                                                    BļNWD,-(SP)
     142.000356
                                                                    SÉQMM
     143
     144
         000362
                   005046
                                                          CLR.
                                                                    -(SP)
                                                                                                 :REINHIBIT BRANCH-CONTROL-REG-
     145
         000364
                                                          CALL
                                                                    MRPCR.
                   005046
     145
         000370
                                                          CLR.
                                                                    -(SP)
     147
         000372
                                                          CALL
                                                                    LBMRP -
                                                                                                 :SINGLE CLOCK TO REINHIBIT BRANCH REGISTER
     i 49
                                                          IF A-BREAKPOINT-IS-IN-EFFECT, BRANCH-TO-CODE-THAT-PREPARES-
     150
                                                          TO FIELD IT. ELSE START FREE RUN WITHOUT BREAKPOINTS.
     151
     152-000376
                                                MGO:
     153
         000376
                   012746
                            001777
                                                          MOV.
                                                                    #1777,-(SP)
                                                                                                 ;SET-CP-MICROCODE-TO INNOCUOUS LOC-(X:3FF:)
     154 000402
                                                          CALL:
                                                                    SECCS:
     155
         000406
                   005046
                                                          CLR.
                                                                                                 REINHIBIT BR CONTROL REG
         000410
     156
                                                                                                 :PROCEED. TO BREAKPOINT:
;YES, SET UP-FOR BKPT:
:SET-SEARCH MODE:
:CLEAR MRP AND PPS NO-CLOCKS
    158
         000414
                   032767
                             000000G-000000G-
                                                                    #BREAK,BASE
                                                          BIT
    159
         000422
                   001047
                                                          BNE
                                                                    MBK -
         000424
    160
                   012767
                             100000
                                      176422 -
                                                          MOV
                                                                    #Q$SM,QR$CR2
         000432
                             146000
     161
                   012746
                                                          MOV.
                                                                    \#<Q$MNC+Q$RNC>,-(SP)
    162 - 000436
                   052716
                                                          BIS.
                                                                    #<Q$LBD+Q$LBP>,(SP)
-(SP)
                                                                                                 :CLEAR DRIVE AND PULSE
    163 000442
                   005046
                                                                                                 :SET-NOTHING-
    164 000444
                                                                                                 : NEW- CSR 1
    165
                                                          PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROL TO USER (IN CASE MICROCODE HANGS OR RUNS FOREVER).
    166
167
                                                                                            ANGS UR RUMAN SILL
                                                                                                                            THE WATER AND THE
    169 000450
                                                          CLEF$S: #EFN.4
                                       Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3
    170
        000462
```

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001-3
MRBUG-
              O M1110 27-MAR-80 15:09 PAGE 5-3
Approved For Release 2005/07/12LIA-RDP85-00514R000200020001-3
     172 - 000466
                                                           WTSE$S - #EFN.4
                                                                                                  ;WAIT-FOR-QIO-COMPLETION-(CHAR INTERRUPT)
     173
                                                                                                  *KILL QIO

*CLEAR NOTHING

*SET MRP AND PPS NO-CLOCKS

*REWRITE CSRI
         000500
                                                           CALL:
                                                                     KILL
     175
         000504
                   005046
                                                           CLR-
                                                                     -(SP)
     176
         000506
                   012746
                             146000
                                                           MOV.
                                                                     #<Q$MNC+Q$RNC>,-(SP)
         000512
                                                           CALL
                                                                     CSR4
     178
         000516
                   005046
                                                           OLR.
                                                                     -(SP)
                                                                                                   SEND 0 TO MRP CONTROL REG
         000520
                                                                                                  :DO:IT:
:SET-LOAD MODE:
:PRINT-MICROPGM-ADDRESS
                                                           CALL
                                                                     MRPCR
     180 000524
                   012767
                             000000 176422
                                                           MOV-
                                                                     #0.QR$CR2
     181
         000532
                                                           CALL
                                                                     MRPMP
     182
         000536
                   000167
                             000000G
                                                           JMP.
                                                                     MRPXX:
     183
     184
     185
                                                 ;
                                                           EXPECT. TO HIT A BREAKPOINT:
     186
     187 000542
                                                 MBK:
     188 000542
                                                           CLEF$S #EFN.3
                                                                                                  :CLEAR · BKPT · EVENT · FLAG
     189
     190
         000554
                                                           GLEF$S: #EFN.4
                                                                                                  ;CLEAR · QIO EVENT · FLAG
     191
     192
                                                           SET-BKPT-ALLOW-BIT-IN-MRP-CONTROL-REG-
                                                          SET: SEARCH: MDDE:
SET: SEARCH: MDDE:
SET: FREE: RUN CLOCK:
WAIT: FOR: BKPT: INTERRUPT: THROUGH: VECTOR: ADDRESS: 274 (SEE:
RTN: "BPTISR") OR: CHARACTER: INTERRUPT: FROM: TERMINAL:
     193
     194
     195
     197
     198 000566
                   012746
                             001000
                                                                                                  :SET-MRP-CNTL-WORD-
:DIRECT-CNTL-WORD-TO MRP-
:SET-SEARCH-MODE-
                                                           MOV.
                                                                     #MBKALLOW,-(SP)
         000572
     199
                                                                    MRPCR -
     200
         000576
                   012767
                             140000
                                       176422
                                                           MOV.
                                                                     #<Q$SM+Q$ENBK>.QR$CR2
         000604
                   012746
                              146000
                                                           MOV-
                                                                     #<Q$MNC+Q$RNC>.-(SP)
                                                                                                  ;CLEAR MRP AND PPS NO-CLOCKS
     202-000610
                   052716
                             001001
                                                           BIS
                                                                     #<Q$LBD+Q$LBP>,(SP)
                                                                                                  ;CLEAR · DRIVE · AND · PULSE ·
     203 000614
                   005046
                                                                     -(SP)
                                                                                                  SET NOTHING
NEW-CSR1
SISSUE 010 TO TERMINAL
                                                           CLR -
     204 000616
                                                                    CSR1
                                                           CALL
     205
         000622
                                                                     HANG2 -
     206
     297
                                                           WAIT-FOR INTERRUPT FROM TERMINAL OR BREAKPOINT INTERRUPT
     208
                                                           FROM MRP
     209
     210 000626
211
                                                           WTLO$5 0,#000014
                                                                                                  :WAIT FOR BKPT OR CHAR INTERRUPT
     212-000642
                                                           RDAF$S: #EFBUF:
                                                                                                  :READ · FOR · DEBUGGING
     213
214
215
216
                                                           INTERRUPT RECEIVED
                                                           RESET-NO-CLOCKS-IN-CSR #1
                                                           SET-LOAD-MODE
     217
218
                                                           PRINT MICROPGM ADDRESS
     219 000654
                                                                                                  :GLEAR NOTHING:
:SET MRP AND PPS NO-CLOCKS
                   885846
                                                                     -(SP)
     220 000656
                   012746
                             146000
                                                           MOV-
                                                                     #<Q$MNC+Q$RNC>,-(SP)
     221
         000662
                                                                    CSR1
#0,-(SP)
MRPCR:
                                                           CALL
                                                                                                  :REWRITE - CSR1
                                                           MOV.
                                                                                                  SEND 0 TO MRP CONFRENCES
     222.000666
                             000000
     223 000672
     224
     225 000676
                   012767
                             000000
                                       176422
                                                           MOV.
                                                                     #0,QR$CR2
                                                                                                  ;SET.LOAD.MODE.;RE-ARM.INTERRUPTS
     226 000704
                   012767
                             001000
                                       176422
                                                           MOV.
                                                                     #Q$REBK,QR$CR2
    227 000712
                                                                                                  PRINT MICROPGM ADDRESS
                                                           CALL
                                                                    MRPMP.
    228 000716
                                                           CALL
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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229 000722 000167 000000G.

MRPXX.

5:89 PAGE 6 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 MRBUG-0-M1110 27-MAR-80 15:09 PAGE/6 PRINT MICROPROGRAM ADDRESS MRPMP: :READ MM. ADDRESS SELECT BIT:
:WRITE MRP CONTROL REGISTER:
:NOW GET WORD FROM MRP:
:COAD RI FOR CONVERSION:
:CLEAR UPPER 6 BITS:
:R5 -> PRINT LINE:
:CONVERT MPA:
:PBINT DN CONCOLE 012746 000100. MOV-#MMADRD,-(SP) CALL MRPCR -MRPLB (SP)+,R1 #177400,R1 CALL MOV 012601 042701 012705 177400. 000000G BIC. MOV. CALL #PRINT, R5 UNPK CALL CONSOL :PRINT-ON-CONSOLE-RETURN 000001 .END

```
MRBUG- MACRO M1110 27-MAR-80 15:09 PAGE_6-1
 SYMBOL TABLE
                                               Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
ALUCKE=-040000
ALUCE-=-004000
                                   BYTE39= 000047
                                                                     BYTE90= 000132
                                                                                                       MMADRD= . 000100
                                                                                                                                         Q$LHP·=·010000
                                   BYTE4 = 0000004
                                                                     BYTE91= 000133
                                                                                                       MMHIGH= ****** GX*
MMLEFT= 000002
MMOE = 000004
                                                                                                                                         Q$MNC -- 140000
           000000RG
                                                                    BYTE92= 000134
BYTE93= 000135
                             002-BYTE40=-000050
                                                                                                                                         Q$MR = 0000052
Q$MRP = 000040
                                   BYTE41 = · 000051
BASE - ****** GX-
BINWD = *****
                                   BYTE42= 000052
                                                                     BYTE94= 000136
                                                                                                       MMWRTE = . 000010
                                                                                                                                         Q$MRP2=.000240
Q$MSC.=.040000
                                                                     BYTE95= 000137
                                   BYTE43= 000053
                                                                                                       MNOBRE = 100000
MREN1 = 000001
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                                   BYTE44= 000054
                                                                     BYTE96 = 000140
BYTE97 = 000141
                                                                                                                                         Q$MSET= 000004
                                   BYTE45= 000055
                                                                                                       Q$MSP = 100000
Q$NCLK = 176000
Q$PP = 000100
002 Q$PP = 000320
                                   BYTE46= 000056
BYTE47= 000057
                                                                     BYTE98= 000142
 BIT10 = 002000
                                                                     BYTE99 = . 000143
BIT11 = 004000
BIT12 = 010000
                                   BYTE48= 000060
                                                                     BYTVAL = 000144
CBKALL = 001000
                                                                                                       MRPMP
                                                                                                                 000726R
                                   BYTE49= 000061
                                                                                                       MRPXX: = : ****** GX:
                                                                                                                                         Q$PP2 - - 000320
BIT13 = 020000
                                   BYTE5 = 000005
                                                                     CBKCLK=-000400
                                                                                                       MSYN. = 000040
                                                                                                                                         Q$QHLT= 000013
 BIT14 = 040000
                                   BYTE50= 000062
                                                                     CNOBRE = 100000
                                                                                                               = 000144
                                                                                                                                         Q$QL
                                                                                                                                                = 000043
                                                                                                                                   Q$QL = 000043
002 Q$QLA = 000053
Q$QLB = 000054
BIT15 = 100000
                                   BYTE51 = 000063
                                                                     CONSOL = · ***** GX
                                                                                                       OF 1
                                                                                                                  000106RG
 ðIT2. =.000004
                                                                     CPCCEN= 010000
CPCR = ******** GX
                                   BYTE52= 000064
                                                                                                       PACK -
         = 000010
 BIT3
                                   BYTE53=-000065
                                                                                                      PLB.
                                                                                                               = .000010
                                                                                                                                        0$0LR = 000001
Q$QW = 000042
         --000020
                                   BYTE54= 0000066
                                                                     CFREAD = 040000
                                                                                                               = 000020
         = 000040
= 000100
 BIT5
                                   BYTE55= 000067
                                                                     CPWRTE = 020000
CSADRD = 000004
                                                                                                                                         Q$RDCD= 000005
                                                                                                               = . 000030
                                                                                                       PLD.
                                                                                                                                        Q$RDCD= 000006
Q$RDMD= 000006
901000
                                   BYTE56= 000070
BYTE57= 000071
BYTE58= 000072
 BIT6
                                                                                                       PLRWR - - 000200
         = . 000200
BIT7
                                                                     CSEQCI = 100000
                                                                                                      PLR.EN=.000200
PRINT.=.******** GX.
QR$CR1=.176420
         = 000400
                                                                     CSOE - - 000040
CSR1 - ******** GX-
CSWRTE - 000100
                                                                                                                                        Q$RNC -- 006000
Q$RSC -- 004000
BIT9
         = -001000
                                   BYTE59= 000073
 BREAK - ******* GX
                                   BYTE6 = 000006
                                                                                                      QR$CR2= 176422
QR$LBR= 176424
                                                                                                                                         Q$RSET= 000010
 BYTE0 = 000000
                                   BYTE60= 000074
                                                                     DBR.RD= 000001
                                                                                                                                        Q$SM = 100000
Q$SP = 000120
 BYTE1 = 000001
                                   BYTE61= 000075
                                                                                                      Q$ATTN=-000100
Q$BCL-=-000001
Q$CCCP=-000040
Q$CHB-=-000400
                                                                     DB$CPP= 001457
DB$SPT= 000026
BYTE10= 000012
BYTE11= 000013
                                   BYTE62= 000076
                                                                                                                                        Q$SP2 - 000340
RGQ:EN= 000200
                                   BYTE63 = 000077
BYTE64 = 000100
                                                                     DB$TPC=-000023
 BYTE12= 000014
                                                                    DISPGS= 100000
DMAAWR= 000005
                                                                                                                                         RGQ.VA= 020000
 BYTE13= 000015
                                   BYTE65= 000101
                                                                                                       Q$CHRL= 000200
                                                                                                                                        SEQCS = ******* GX*
SEQMM = ******** GX*
BYTE14= 000016
                                   BYTE66=-000102
BYTE67=-000103
                                                                     DMARRD = . 000003
                                                                                                      Q$CLR. = .000040
Q$CNC - = .030000
Q$CP - = .000060
 BYTE15= 000017
                                                                     DMARWR = . 000004
                                                                                                                                         SEQ.CI= 000010
 BYTE16= 000020
                                   BYTE68= 000104
                                                                    EFBUF = ******** GX-
EFN.3 = ******* GX-
EFN.4 = ******** GX-
                                                                                                                                        SSi
                                                                                                                                                    000132RG·...002
BYTE17= 000021
BYTE18= 000022
                                   BYTE69= 000105
                                                                                                       Q$CPCC= 000010
                                                                                                                                        S$CLR = 000000
                                   BYTE7 = 000007
BYTE70= 000106
BYTE71= 000107
                                                                                                      Q$CP2.=.000260
Q$CSC.=.010000
                                                                                                                                               - 0000001
                                                                                                                                         S$LA
 BYTE19= 000023
                                                                     ENBR-
                                                                            = 010000
                                                                                                                                         S$QB
                                                                                                                                                 = 000005
 BYTE2 - 000002
                                                                     ERR10 = ****** GX
ERR4 = ****** GX
                                                                                                       Q$CSEL=-000360
                                                                                                                                                 = · 000006
= · 000004
                                                                                                                                        S$QR
BYTE20=-000024
                                   BYTE72= 000110
                                                                                                       Q$CSET= 000002
                                                                                                                                        S#QX
BYTE21= 000025
                                   BYTE73=-000111
                                                                     ERR5
                                                                             = ***** GX
                                                                                                      Q$CSP.=.020000
Q$DMA.=.000001
                                                                                                                                         S$SR
                                                                                                                                                 = 000007
 BYTE22=-000026
                                   BYTE74= . 000112 .
                                                                     FIND.
                                                                             =·***** GX
BYTE23=-000027
BYTE24=-000030
                                                                                                                                        S$S1
                                   BYTE75= 000113
                                                                     GO 1
                                                                                000306RG
                                                                                                      · Q$ENBK = · 040000
                                                                                                                                        S$92
                                                                                                                                                 = 000014
                                                                     HANG2 = ****** GX
                                   BYTE76= 000114
                                                                                                                                         TD$CTR=-176370
                                                                                                      Q$ENOP= . 020000
BYTE25=:000031
                                                                     KILL: =:****** GX
LBMRP:=:****** GX
                                   BYTE77=-000115
                                                                                                      Q$FAL -- 004000
Q$FC -- 000045
                                                                                                                                         TD$CTW= 176360
BYTE26= 0000032
                                  BYTE78= 000116
BYTE27 - 000033
BYTE28 - 000034
                                                                                                                                         TD$INL = 004000
                                   BYTE79= 000117
                                                                    LOC.EN= 000100
LOC.WA= 040000
LOC.WB= 100000
                                                                                                              = 000044
                                                                                                                                        TD$MEM= 000270
TD$OAR= 176344
TD$OTR= 176346
                                  BYTE8 = 000010
                                                                                                      Q$FP· = 000046
Q$HBF·= 000002
BYTE29=-000035
BYTE3 =-000003
                                  BYTE80=.000120
BYTE81=.000121
BYTE82=.000122
                                                                                                      Q$ICP·=·000005
Q$IHB·=·000003
                                                                     MAREN 1 = . 000001
                                                                                                                                         TD$QRD=.000274
BYTE30= 000036
                                                                     MAREH2=.004000
                                                                                                                                        TD$SW·=·176376
TD$TAR=·176372
TD$TAW=·176362
BYTE31= 000037
BYTE32= 000046
BYTE33= 000041
                                  BYTE83=-000123
                                                                    MARLOD= 010000
MAROUT= 000002
                                                                                                       Q$IHRL= 000002
                                   BYTE84= 000124
                                                                                                      Q$IMRP=-000007
Q$LBD-=-001000
                                  BYTE85= 000125
BYTE86= 000126
                                                                     MAR.LO= 002000
                                                                                                                                         TD$TDR= 176374
BYTE34= 000042
                                                                    MAR:0U= 000040
                                                                                                      Q$LBDP= 001001
                                                                                                                                         TD$TDW= · 176364
BYTE35=-000043
                                  BYTE87= 000127
                                                                               000542R
                                                                                                      Q$LBP = 000001
Q$LDCD= 000003
Q$LDMD= 000004
                                                                    MBK -
                                                                                                 002
BYTE36=-000044
                                                                                                                                               BYTE88= 000130
                                                                    MBKALL = . 001000
BYTE37= 0000045
                                  BYTE89= 000131
                                                                    MBKCLK=-000400
                                                                                                                                               BYTE38= 000046
                                                                                            002 · Q$LDPP = · 002000
CIA-RDP85-00514R000200020001-3
                                                                    MGO -
                                                                               0003766
                                                                                                                                         T$8SO·=·100000
                                               Approved For Release 2005/07/1
```

```
MRBUG-
                 0.M1110 27-MAR-80 15:09 PAGE 6-2.
                                               Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
SYMBOL . TA
T$BT- -= 0000020
                                   T$SEG1 = . 000000
                                                                     WORD26≃-000064
                                                                                                       WORD51=-000146
                                                                                                                                          WORD77=-000232
                                                                                                                                          WORD77 = 000232
WORD78 = 000234
WORD79 = 000236
WORD8 = 000240
WORD81 = 000240
WORD82 = 000244
T$BTAR= 000020
                                                                                                       WORD52=-000150
WORD53=-000152
                                   T$SEG2=-000001
                                                                     WORD27= 000066
WORD28= 000070
T$BTD - = 002000
T$CD - = 000100
T$CLK - = 002000
                                   T$SEG3= 000002
                                   T$SO -
                                          = - 000001
                                                                     WORD29= 000072
                                                                                                       WORD54= 000154
                                   T$UBUS= · 100000
                                                                     WORD3 = 000006
                                                                                                        WORD55= 000156
1$DISK=:0002000
1$DRD:=:000004
                                   T$1CLK= 000400
                                                                     WCRD30= 000074
                                                                                                       WORD56= 000160
WORD57= 000162
                                   T$8BEN=:000020
                                                                     WORD31 = 000076
T$EMEM= : 010000
                                   UBD.IN=-000020
                                                                     WORD32= 000100
                                                                                                       WORD58= 000164
                                                                                                                                          WORD83= 000246
T$FSAA= 0000000
                                   UNPK - - ****** GX
                                                                     WORD33=-000102
                                                                                                       WORD59= 000166
                                                                                                                                          WORD84= 000250
WORD85= 000252
T$FSAB= 000004
                                   WORD0 = 000000
                                                                     WORD34= 000104
WORD35= 000106
                                                                                                       WORD6 = 000014
T$FSAC=-000014
                                   WORD1 = 000002
                                                                                                       WORD60= 000170
WORD61= 000172
                                                                                                                                          WORD86=-000254
WORD87=-000256
WORD88=-000260
T$FSB2=-000010
T$IB- =-000026
                                   WORD10= 000024
                                                                     WORD36= 000110
                                  WORD11=-000026
WORD12=-000030
WORD13=-000032
                                                                                                       WORD62=-000174
                                                                     WCRD37=-000112
T$IBAR= 000024
                                                                     WORD38=-000114
                                                                                                        WORD63= 000176
                                                                                                                                          WORD89= 000262
WORD9 = 000022
T$IBE·=∙020000
T$IBF·=∙040000
                                                                     WORD39= 000116
WORD4 = 000010
                                                                                                        WORD64= 000200
                                   WORD14= 000034
                                                                                                                                          WORD90 = 900022

WORD90 = 900266

WORD91 = 9000266

WORD92 = 9000270

WORD93 = 9000272
                                                                                                       WORD65= 000202
Т$ICD - = - ййййдай
                                   WORD15=-000036
                                                                     WORD40= 000120
T$ICD - 000040
T$MODE - 004000
T$08 - 000036
T$08E - 004000
T$08F - 010000
                                                                                                       WORD66= 000204
WORD67= 000206
                                  WORD16=-000040
WORD17=-000042
                                                                     WORD41=-000122
                                                                     WORD42= 000124
WORD43= 000126
                                                                                                       WORD68= 000210
                                   WORD 18 = . 000044
                                                                                                                                        __WORD94= 000274
-_WORD95= 000276
                                                                                                       WORD69=.000212
                                  WORD19=-000046
WORD2-=-000004
                                                                     WORD44= 000130
                                                                                                       WORD7 = 0000016
T$0BRA= 000034
                                                                     WORD45= 000132
                                                                                                       WORD70= 000214
                                                                                                                                          .WORD96= 000300
T$08WA= 0000032
                                   WORD20 - 000050
                                                                     WORD46=-000134
WORD47=-000136
                                                                                                        WORD71=-000216
                                                                                                                                          WORD97= 000302
T$0UTA= 100000
T$RBDO= 000200
T$RNB = 000040
                                   WORD21= 000052
                                                                                                       WORD72=.000220
                                                                                                                                          WORD98= 000304
                                   WORD22=+000054
                                                                     WORD48 = 000140
                                                                                                       WORD73 = - 999222
                                                                                                                                          WORD99 - 000306
                                   WORD23= AAAA56
                                                                     WORD49= 000142
WORD5 = 000012
                                                                                                       WORD74= 000224
                                                                                                                                          WRDVAL = 000310
XTREAD = 001000
T$RSET= 040000
T$SC = 000022
                                   WORD24= 0000060
                                                                                                       WORD75 = . 000226
                                   WORD25=-000062
                                                                     WORD50=-000144
                                                                                                       WORD76= 000230
                                                                                                                                          XTWRTE= 000400
T$SCLK= 020000
. ABS.
           природа
                           000
           попопо
                           001
MRBUG.
                           002
           000766
ERRORS DETECTED:
VIRTUAL-MEMORY-JSED:
                               3584 WORDS: (-14 PAGES)
DYNAMIC MEMORY: 4916 WORDS (18 PAGES)
ELAPSED TIME: 00:00:48
MRBUG, MRBUG/-SP=[20,1]IM,[20,1]MRBUG
```

CPBUG2 -

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ALT STATE

DEBUGGING COMMANDS

```
CP---- MACRO M1110 27-MAR-80 14:40 PAGE 6
                                      Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      40
     41
42
43
                                                       TABLE OF CP COMMAND MNEMONICS AND THEIR ASSOCIATED-ROUTINE
                                                       ADDRESSES:
     44
45
         000000
                                              CPTBL:
      46
         000000
                      101
                               124
                                                        .ABCII
                                                                                   :SET-BREAKPOINT
                                                                AT2.
      47
         000002
                  000000G
                                                        .WORD
      48
         000004
                               106
                                                        .ASCII
                                                                                   ;DISABLE BREAKPOINT
     49
50
51
52
53
54
         000006
                  000000G
                                                        .WORD
                               122
                      114
                                                        .ASCII
                                                                                   :LOAD ALL REGISTERS
         000012
                  000000G
                                                        .WORD
                                                                                   PRINT REGISTERS
         000014
                               107
                                                        .ASCII
         000016
000020
                  000000G
                                                        .WORD
                               103
                      120
                                                        .ascit
                                                                                   ;SINGLE STEP A NUMBER OF TIMES (PROCEED)
     55
56
57
         000022
                  000000G
                                                        .WORD
         000024
                                123
                                                        .ASCII
                                                                                   :SINGLE - STEP -
         000026
000030
                  000000G
                                                        .WORD
                               117
                      107
                                                        .ASCII
                                                                 ZG0Z
                                                                                   ;PROCEED FROM BREAKPOINT
      59
         000032
                  000000G
                                                        .WORD
      60
         000034
                      106
                               122
                                                                                   :RUN - BOTH - MRP - AND - CP
                                                        .ASCII
                  000000G
      61
         000036
                                                        .WORD
         000040
      62
                               124
                      123
                                                        .ASCII
                                                                                   :STORE · INTO · A · REG
      63
         000042
                  000000G
                                                        .WORD
         000044
                                105
                                                        .ASCII
                                                                 ZREZ
                                                                                   :READ · FROM · A · REG
      65
         000046
                  000000G
                                                        .WORD
      66
67
         000050
                               104
                                                        .ASCII
                                                                                    :LOAD · MEMORY ·
         000052
                   000000G
                                                        .WORD
         000054
                      120
                               122
                                                        .ASCII
                                                                                   PRINT FROM MEMORY
      69
         000056
                   000000G
                                                        .WORD
      78
         000060
                      120
                                102
                                                        .ASCII
                                                                                    :PRINT-BUFFERS
         000062
                   000000G
                                                        .WORD
                                                                 PB2
         000064
                                123
                                                        .ASCII
                                                                 ZRSZ
      73
74
         000066
                   000000G
                                                        .WORD
         000070
                                114
                      103
                                                        ASCII.
                                                                 201.2
                                                                                    :CALL · HQR · LOADER
                   000000G
         000072
                                                        .WORD
                                                                 CL2
                   000017
                                              CPNUM-
                                                                 <.-CPTBL>/4
```

```
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
 78
                                                       {\tt INDEX:WORD:FOR:READING:AND:WRITING:CP::REGISTER\widetilde{S}}
 80
    000074
              000000
                                             INDEX:: .WORD
 Θí
 82
                                                       BCL -
 84
 85
     000076
                                             BCL::
     000076
               000200
                                                       .WORD
                                                                 128.
                                                                                     ;BUFFERS ARE-128 WORDS
;HIT-LIST-BUFFER-
 87
     000100
               0001301
                                                       .WORD
                                                                 HLB
     000102
               000000
                                                       .WORD
                                                                 0
     000104
                                                       .WORD
                                                                 õ
 90
     000106
               000000
                                                       .WORD
 91
     000110
               000530
                                                       .WORD
                                                                 HRL
                                                                                     :HRL BUFFER
     000112
               000000
                                                       .WORD
                                                                 0
 93
                                                                                         - 1/2 miles
     000114
               000000
                                                       .WORD
 94 000116
               000000
                                                       .WORD
 95
     000120
                                                       .BLKW
                                                                                     :END-OF-BUFFER-ADDRESSES
 96
 97
                                                       HIT-LIST AND HRL BUFFERS
 98
 99
     000130
                                             HLB::
100
     000130
                                                       .BLKW-
                                                                 128.
101
     000530
                                             HRL::
102-000530
               яваяя і
                                                       .WORD
                                                                 000001
                                                                                     :=X100011
     000532
               021042
                                                       .WORD.
                                                                021042
031464
                                                                                     :=X122221
:=X133341
104 000534
               031464
105
     000536
               000401
                                                       .WORD
                                                                 000401
                                                                                     :=X:0101*
 106
     000540
               000004
                                                       .WORD
                                                                 000004
052525
                                                                                     ;=X'0004'
;=X'5555'
     000542
000544
108
               052525
                                                       .WORD
109
               063146
                                                       .WORD
                                                                 063146
                                                                                     ;=X166661
     000546
               000402
110
                                                       .WORD
                                                                 000402
                                                                                     :=X'0102'
111
     000550
               000002
                                                                                     :=X:00021
112
113 000552
114 000554
299556
                                                       .WORD
                                                                 000002
               000007
104210
                                                       .WORD
                                                                 000007
                                                                                     ;=X100071
                                                       .WORD
                                                                 104210
                                                                                     ;=X188881
               114631
                                                                 114631
000403
                                                                                     :=X'9999'
:=X'0103'
                                                       .WORD
116
117
     000560
               000403
                                                       .WORD
     000562
               001402
                                                       .WORD
                                                                                     :=X:0302
     000564
000566
119
               000012
                                                       .WORD
                                                                 000012
                                                                                     :=X:0000
               135673
146314
120
                                                       .WORD
                                                                 135673
                                                                                     ; =X'BBBB'
                                                                                                                   \vec{p}_{i}^{A_{i}}
121
     000570
                                                                                     ;=X1CCCC1
;=X101011
                                                       . WORD
                                                                 146314
122 000572
123 000574
               000401
                                                                 000401
                                                       .WORD
               140000
                                                       .WORD
                                                                 140000
                                                                                     :=X100001
124
     000576
                                                       .BLKW
                                                                 128.-<.-HRL/2>
125
126
                                                       LIST.
                                                                 BEX-
                                                       .NLIST
                                                                CND.
```

CP----

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```
CP-----MACRO-M1110 27-MAR-80 14:40 PAGE-8
                                        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     128
     129
     130
                                                          OP ROUTINES.
    131
132
     133
         001130
                                                CP::
     134
         001130
                   004767
                             000000G
                                                                    PC.FIND.
                                                                                       :LOCATE · THE · COMMAND · IN · THE · COMMAND · LINE
     135
         001134
                   103003
                                                          BCC
                                                                    1$
                                                                                       :OK, CONTINUE
     136
         001136
                   004767
                             000000G
                                                                    PC:ERR3
                                                          JSR
         001142
                   000422
                                                                    CPXX
                                                          BR
     138
         001144
                   022700
                             000002
                                                 1$:
                                                          CMP
                                                                    #2,R0
                                                                                       :COMMANDS - ARE - 2 - CHARS -
     139
         001150
                   001403
                                                          BEQ
                                                                    2$
     140
         001152
                   004767
                             000000G
                                                          JSR
                                                                    PC, ERR8 0
     141
         001156
                   000414
                                                          BR
                                                                    CPXX
                                                                                       :TRY-AGAIN
     142
     143
         001160
                   012700
                             000017
                                                          MOM
                                                                                       :R0 = NUMBER OF COMMANDS
:R2 -> TABLE OF COMMAND MNEMONICS
:FIND MATCH IN TABLE
:OK: CONTINUE
:COMMAND NOT IN TABLE
                                                                    #CPHUM,R0
     144
         001164
                   012702
004767
                             0000001
                                                          MOV.
                                                                    #CPTBL,R2
     145
         001170
                                                          JSR -
BCC -
                             000000G
                                                                    PC.SCAN.
          001174
                    103003
                                                                    3$
     147
         00117E
                   004767
                                                          JSR
                                                                    PC.ERR12
     148
         001202
                   000402
                                                                    CPXX
                                                                                       :TRY-AGAIN-
     149
     150
                                                          JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
     152.001204 000171
                             000000
                                                                    @(R1)
     153
     154
     155
                                                          LOCAL CP LOOP. INCLUDE PROMPILIOR CR. COMMAND.
     156
157
         001210
                                                CPXX::
     159
         001210
                   012767
                             050103
                                                                    #"CP.GCMBLK+G.DPRM+2::MOVE.CP.NAME TO.GCM.BLOCK.
PC.GCONLY::PROMPT.
PC.FIND::LOCATE:THE.COMMAND.IN.THE.COMMAND.LINE:
                                      .000000C
                                                          MOV
                   004767
004767
     169
         001216
001222
                             000000G
                                                          JSR
     161
                             000000G
                                                          JSR
BCC
                                                                    PC.FIND
          001226
                    103003
                                                                                        OK, CONTINUE.
         001230
001234
     i63
                   004767
                             000000G
                                                          JSR
                                                                    PC,ERR3
     164
                   000765
                                                          BR
                                                                    CPXX
          001236
                   022700
                             000002:
                                                          CMP
                                                 1$:
                                                                    #2,R0
                                                                                        :COMMANDS ARE 2 CHARS
     166
         001242
                   001403
                                                          BEQ
                                                                    2$
     167
         001244
                   004767
                             000000G
                                                          JSR
                                                                    PC,ERR0
                                                                                        TRY AGAIN
     168
                   000757
         001250
     169
          001252
                                                                    #CPNUM,R0
     170
                   012700
                             000017
                                                          MOV-
                                                                                        RØ = NUMBER OF COMMANDS
     17 i
         001256
                   012702
                             0000004
                                                                    #CPTBL,R2
                                                          MOV-
                                                                                        :R2.-> TABLE.OF.COMMAND.MNEMONICS
         001262
                   004767
                             000000G
                                                          JSR
                                                                    PC.SCAN
                                                                                        FIND MATCH IN TABLE
     173
         001266
                    103005
                                                          BCC
BIC
                                                                    3$
                                                                                        OK, CONTINUE
         001270
                   042767
                             000000G -000000G
                                                                    #BREAK, BASE
                                                                                       CLEAR BREAKPOINT FLAG
RETURN TO QMAIN, LOOK FOR PROCESSOR MNEMONIC.
     175
         001276
                   000167
                             000000G
                                                                    COMXX.
     176
     177
                                                          JUMP . TO . THE . ROUTINE . THAT . GOVERNS THE . COMMAND .
     179 001302 000171 000000
                                                          JMP
                                                                    @(R1)
                                                                                                                       33
```

TO SERVE STATE OF THE SERVE STAT

CP------MACRO-M1110 27-MAR-80 14:40 PAGE 10 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

200 201 202-203 204 205 206 207 208 209 210 211 212-213 214 215 216 217 218 001310 220 221 TEMPORARILY DELETED ****************** PRINT-CP-REGISTERS-UPON·ENTRY: R0 =-REGISTER·TO·BE·READ· UPON·EXIT: Ri =-REGISTER·VALUE· REREG:: 000207 RTS. PC: 000001 .END

```
the same of the same
CP------ MARCO M1110 27-MAR-80 14:40 PAGE 10-1 Approved For Release 2005/07/1 CIA-RDP85-00514R0002000200013
                                                                                                                                               .
                                   BYTE39=-000047
                                                                      BYTE90= 000132
                                                                                                         MAROUT= . 0000002 .
                                                                                                                                            Q$LDPP=:002000
ALLICKE = · 040000
ALU0E - 004000
AT2 - ******** GX
                                   BYTE4 = 000004
                                                                      BYTE91=-000133
                                                                                                         MAR.LO= 002000
                                                                                                                                            Q$LHP -- 010000
                                                                      BYTE92= 000134
BYTE93= 000135
                                   BYTE40=-000050
                                                                                                         MAR.OU= 000040
                                                                                                                                            Q$MNC -= 140000
                                                                                                                                            Q$MR = 000052
Q$MRP = ,000040
Q$MRP2 = 000240
                                   BYTE41 = . 000051
BYTE42 = . 000052
                                                                                                         MBKALL = . 001000
MBKCLK = . 000400
A01
        = 010000
        = · ******* 3X
                                                                      BYTE94= 000136
BASE
                             002 · BYTE43 = · 000053
                                                                      BYTE95= 000137
                                                                                                         MMADRD = 000100
BCL -
           000076KG+
                                                                                                                                            Q$MSC·=·040000
Q$MSET=·000004
Q$MSP·=·100000
                                                                                                         MMLEFT= 000002
MMOE = 000004
BITVAL = . 000000
                                   BYTE44=:000054
                                                                      BYTE96= 000140
                                   BYTE45= 000055
BYTE46= 000056
                                                                      BYTE97=:000141
BITØ
       - 0000001
        = . 000002
                                                                      BYTE98 = . 000142
                                                                                                         MMURTE = . 000010
BITE
                                                                                                                                            Q$NCLK= 176000
Q$PP = 000100
Q$PPSW= 000320
Q$PP2 = 000300
                                   BYTE47= .000057
                                                                      BYTE99 = . 000143
                                                                                                         MNOBRE = 100000
BITIO
        = 002000
                                                                      BYTVAL = 000144
CBKALL = 001000
CBKCLK = 000400
CL2 = ******** GX-
CNOBRE = 100000
                                                                                                         MREN1 = 000001
MREN2 = 020000
MSYN = 000040
        = 004000
                                   BYTE48= 000060
BIT12 - 010000
                                   BYTE49= 000061
BYTE5 = 000005
BIT13 = 020000
                                                                                                                  = 000144
                                                                                                                                            Q$QHLT= 000013
BIT14 = 040000
                                   BYTE50= 0000062
                                                                                                         0F2+
BIT15 = 100000
                                   BYTE51=-000063
                                                                                                                  = · жжжжжж GX ·
                                                                                                                                            Q$QLA = 900043
Q$QLA = 900053
Q$QLB = 900054
Q$QLR = 900042
BIT2 - 000004
BIT3 - 000010
                                   BYTE52=-000064
                                                                      COMXX: = · ********* GX
                                                                                                         PB2+
                                                                                                                  = · ****** GX ·
                                   BYTE53= 000065
                                                                                  001130RG
                                                                                                                  = · ******* GX ·
                                                                      CP
                                                                                                   002 - PC2 -
         = 000020
                                   BYTE54= 000066
                                                                      CPCCEN= 010000
                                                                                                         PLB.
                                                                                                                  - 000010
BIT4
                                                                      CPNUM = 000017
CPREAD = 040000
        = · 000040
= · 000100
                                   BYTE55= 000067
BYTE56= 000070
                                                                                                                  = · 000020
= · 000030
                                                                                                                                            Q$RDCD= 000005
BIT6
                                                                                                         PLD.
                                   BYTE57= 000071
                                                                                                   002 PLRWR - = - 000200
BIT7
         = 000200
                                                                      CPTBL ·
                                                                                 000000R
                                                                                                                                            Q$RDMD= 000006
BIT8 - 000400
BIT9 - 001000
BREAK - ********* GX
                                   BYTE58=-000072
BYTE59=-000073
                                                                                                                                            Q$REBK=-001000
Q$RNC-=-006000
Q$RSC-=-004000
                                                                      CPWRTE = . 020000
                                                                                                         PLR.EN= 000200
                                                                                  001210RG
                                                                                                   002 PR2
                                                                      CPXX:
                                                                                                                 = · ********* GX ·
                                   BYTE6 = 000006
                                                                      CSADRD = . 000004
                                                                                                         QR$CR1=:176420
BYTE0 = 000000
BYTE1 = 000001
                                   BYTE60= 000074
BYTE61= 000075
BYTE62= 000076
                                                                      CSEQCI = 100000
CSOE = 000040
CSWRTE = 000100
                                                                                                         QR$CR2= 176422
                                                                                                                                            Q$RSET= 000010
                                                                                                         QR$LBR=-176424
Q$ATTN=-000100
Q$BCL-=-000001
Q$CCCP=-000040
                                                                                                                                            Q$SM = 100000
Q$SP = 000120
BYTE10= 0000012
                                   BYTE63= 000077
BYTE11= 000013
                                                                      DBR.RD=-000001
                                                                                                                                            Q$SP2 - - 000340
BYTE12=-000014
                                   BYTE64=.000100
                                                                      DB$CPP=:001457
                                                                                                                                            REREG.
                                                                                                                                                       001310RG
                                                                      DB$SPT=:000026
DB$TPC=:000023
DISPGS=:100000
                                   BYTE65=-000101
BYTE66=-000102-
BYTE67=-000103
8YTE13= 000015
                                                                                                         Q$CHB - = - 000400
                                                                                                                                            RE2
                                                                                                                                                    -- жжжжжж GX-
                                                                                                                                            RGQ.EN= 000200
                                                                                                         Q$CHRL=.000200
Q$CLR.=.000040
3YTE14= 000016
BYTE15= 000017
                                                                                                                                            RGQ.VA=-020000
                                                                                                                                            RG2 = ********* GX-
RS2 = ******** GX-
                                                                      DMAAWR = - 0000005
                                                                                                         Q$CNC -- 030000
BYTE16=:000020
                                   BYTE68= 000104
                                   BYTE69= 000105
BYTE7 = 000007
                                                                      DMARRD = 000003
BYTE17=.000021
                                                                                                         Q$CP - 000060
                                                                                                                                            SCAN = жжжжж GX,
SEQ.CI = 000010 . ; ;
SS2 = жжжжж GX,
ST2 = жжжжж GX
                                                                                                         Q$CPCC=-000010
Q$CP2-=-000260
Q$CSC-=-010000
BYTE18=-000022
                                                                      DMARWR= . 000004
                                                                      ENBR: =:010000
ERR12:=:********* GX
BYTE19= 000023
BYTE2 = 000002
                                   BYTE70= 000106
                                   BYTE71= 000107
                                                                                                         Q$CSEL = 0000360
Q$CSET = 0000002
Q$CSP = 020000
BYTE20= 000024
                                   BYTE72= 000110
                                                                       ERR3
                                                                              = · жжжжжжж GX ·
                                                                                                                                            S$CLR = 000000
S$LA = 000001
S$QB = 000005
                                   BYTE73= 000111
                                                                      BYTE21 = - 000025
                                   BYTF74= 900112
BYTF22= : 000026
BYTE23= 000027
                                    BYTE75= 000113
                                                                       FR2
                                                                               = · жижини GX ·
                                                                                                         Q$DMA · = · 000001
 BYTE24= 0000030
                                   BYTE76= 000114
BYTE77= 000115
                                                                       GCMBLK = · ****** GX
                                                                                                         Q$ENBK = . 040000
                                                                                                                                             S$QR
                                                                                                                                                    ■ . 0000006
                                                                      GCONLY= ******* GX-
GO2 = ******* GX-
                                                                                                         Q$ENOP= 020000
                                                                                                                                                    = . 000004
BYTE25= 000031
                                                                                                                                            9$0X
                                                                                                    Q$FAL = 004000
Q$FC = 000045
002 Q$FC = 000044
                                                                                                                                                    = . 000007
 BYTE26= 000032
                                    BYTE78= 000116
                                                                                                                                             S$SR
                                                                                                                                                    = 000010
= 000014
                                                                       G.DPRM= ****** GX
                                                                                                                                             S$S1
 BYTE27 = 000033
                                    BYTE79= 000117
                                   BYTE8 = 000010
                                                                                  000130RG
 BYTE28 = . 000034
                                                                      HLB.
                                                                                                                                             9$92
BYTE29= 000035
BYTE3 = 000003
                                                                                                                - 000046
                                    BYTE80= .000120
                                                                                  000530RG
                                                                                                    002 · Q$FP ·
                                                                                                                                             TD$CTR=-176370
                                                                      HR:
                                                                      002 Q$HBF - 000002
002 Q$ICP - 000006
Q$IHB - 000003
                                    BYTE81= 000121
                                                                                                                                             TD$CTW= · 176360
BYTE30=-000036
BYTE31=-000037
BYTE32=-000040
                                   BYTE82= 000122
BYTE83= 000123
                                                                                                                                             TD$INL=:004000
                                                                      TD$MEM= . 000270
                                                                                                         Q$IHRL=.000002
Q$IMRP=.000007
Q$LBD.=.001000
                                                                                                                                             TD$0AR= 176344
TD$0TR= 176346
                                    BYTE84= 000124
 BYTE33= 000041
                                   BYTE85 = 000125
BYTE86 = 000126
                                                                                                                                             70$URD - 000274
TD$SW - 176376
TD$TAR - 176372
BYTE34= 000042
                                                                                                         Q$LBDP=-001001
Q$LBP-=-000001
                                                                      LR2: = : ****** GX
MAREN1=:000001
BYTE35= 000043
                                   BYTE87 = . 000127
BYTE36= 0000044
                                   BYTE88 = . 000130
                                                                       MAREN2 = . 004000
                                                                                                          0$LDCD= 000003
                                                                                                                                             TD$TAW= : 176362
BYTE37= 000045
                                   BYTE89= 000131
                                   BYTE9 = 000011
                                                                      MARLOD = . 010000
                                                                                                          Q$LDMD= 000004
BYTE38 = . 000046
                                                                                                                                             TD$TDR=-176374
                                                Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
```

```
СР------ MACRO-M1110 27+MAR+80 14 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
                                                                 T$RBD0=-000200
                                                                                                                                 WORD23=-000056
WORD24=-000060
                                                                                                                                                                                                WORD5 = 000012
WORD50= 000144
                                                                                                                                                                                                                                                                  WORD76=-000230
WORD77=-000232
TD$TDW= 176364
T$AD· = 000020
T$BA· = 000002
                                                                 T$RNB - = - 000040
                                                                T$RSET= 040000
                                                                                                                                 WORD25= 000062
                                                                                                                                                                                                 WORD51 = 000146
                                                                                                                                                                                                                                                                  WORD78= 000234
                                                                T$SC- = 000002
T$SCLK = 000002
T$SEG1 = 000000
T$SEG2 = 0000001
                                                                                                                                 WORD26=-000064
WCRD27=-000066
WORD28=-000070
T$BD - - 000010
                                                                                                                                                                                                  WORD52=-000150
                                                                                                                                                                                                                                                                  WORD79= 000236
                                                                                                                                                                                                  WORD53=-000152
T$850 - = · 100000
                                                                                                                                                                                                                                                                  WORD8 = 000020
                                                                                                                                                                                                  WORD54= 000154
                                                                                                                                                                                                                                                                  WORD80 = . 000240,
WORD81 = . 000242
T$8T: =:000020
                                                                                                                                 WORD29=-000072
                                                                                                                                                                                                  WORD55= 000156
T$BTAR= 000030
T$BTAR=:000030
T$BTD:=:002000
T$CD:=:000100
T$CLK:=:002000
T$DISK=:000200
T$DRD:=:000004
                                                                                                                                 WORD3 = 000006
                                                                                                                                                                                                  WORD56=-000160
                                                                                                                                                                                                                                                                  WORD82= 000244
                                                                 T$SEG3=-000002
                                                                 T$SO - = 0000001
T$UBUS = 100000
T$1CLK = 000400
                                                                                                                                 WORD30=.000074
WORD31=.000076
                                                                                                                                                                                                  WORD57=-000162
                                                                                                                                                                                                                                                                  WORD83=.000246
                                                                                                                                                                                                                                                                  WORD84= 000250
                                                                                                                                                                                                  UORD58= 000164
                                                                                                                                 WORD32= 000100
                                                                                                                                                                                                  WORD59= 000166
                                                                                                                                                                                                                                                                  WORD85= 000252
                                                                 T$8BEN= 000020
                                                                                                                                 WORD33=-000102
                                                                                                                                                                                                  WORD6 = 000014
                                                                                                                                                                                                                                                                  WORD86=-000254
 T$EMEM= · 010000
T$FSAA = · 000000
T$FSAB = · 000004
                                                                 UBD.IN=-000020
WORD0 = 000000
WORD! = 000002
                                                                                                                                                                                                 WORD60= 000170
WORD61= 000172
WORD62= 000174
                                                                                                                                                                                                                                                                  WORD87=-000256
WORD88=-000260
                                                                                                                                  WORD34≕.000104
                                                                                                                                 WORD35 = . 000106
                                                                                                                                 WORD36=-000110
                                                                                                                                                                                                                                                                  WORD89= 000262
 T$FSAC= .000014
                                                                 WORD10= 000024
                                                                                                                                  WORD37=-000112
                                                                                                                                                                                                  WORD63=.000176
                                                                                                                                                                                                                                                                  WORD9 = 000022
WORD90 = 000264
 T$FSB2=-000010
T$IB- =-000026
                                                                 WORD11= 000026
WORD12= 000030
                                                                                                                                 WORD38=-000114
WORD39=-000116
                                                                                                                                                                                                  WORD64= 000200
                                                                                                                                                                                                  WORD65= 000202
                                                                                                                                                                                                                                                                  WORD91=-000266
                                                                                                                                                                                                 WORD66=-000204
WORD67=-000206
WORD68=-000210
 T$IBAR=:000024
                                                                 WORD13= 0000032
                                                                                                                                  WORD4 = 000010
                                                                                                                                                                                                                                                                  WORD92 = . 000270...
                                                                                                                                                                                                                                                                 WORD92 - 90027 9 WORD93 - 900272 WORD94 - 900274 WORD95 - 900276 WORD97 - 900302 WORD97 - 90020 WORD97 - 90020 WORD97 - 90020 
                                                                 WORD14= 000034
WORD15= 000036
WORD16= 000040
 T$IBE - = 020000
T$IBF - = 040000
                                                                                                                                 WORD40= 000120
WORD41= 000122
                                                                                                                                 WORD42=-000124
                                                                                                                                                                                                  WORD69= 000212
 T$ICD - = 000040
 T$MODE = 004000
T$OB = 000036
                                                                 WORD17= 0000042
                                                                                                                                  WORD43= 000126
                                                                                                                                                                                                  WORD7 = 000016
                                                                                                                                                                                                  WORD70= 000214
WORD71= 000216
WORD72= 000220
                                                                  WORD18=-000044
                                                                                                                                  WORD44= 000130
                                                                                                                                                                                                                                                                  WORD98= 000304
 T$08E · = · 004000
T$08F · = · 010000
                                                                 WORD19=-000046
WORD2-=-000004
                                                                                                                                 WORD45=-000132
                                                                                                                                 WORD46=-000134
                                                                                                                                                                                                                                                                  WORD99= 000306
 T$0BRA= 000034
                                                                 WORD20= 000050
                                                                                                                                  WORD47=-000136
                                                                                                                                                                                                  WORD73=-000222
                                                                                                                                                                                                                                                                   WRDVAL = . 000310
 T$08WA= · 000032
                                                                  WORD21 = 000052
                                                                                                                                  WORD48= 000140
                                                                                                                                                                                                  WORD74= 000224
                                                                                                                                                                                                                                                                  XTREAD= 001000
 T$0UTA= 100000
                                                                 WORD22=-000054
                                                                                                                                  WORD49= 000142
                                                                                                                                                                                                  WORD75=-000226
                                                                                                                                                                                                                                                                  XTWRTE = 000400
  . ABS. 000000
                                                    000
                      000000
                      001312
                                                    002
 ERRORS DETECTED:
                                                 0
```

VIRTUAL MEMORY USED: 3201 WORDS (+13 PAGES)

3860 WORDS: (14 PAGES)

DYNAMIC MEMORY: 3860 WORDS ELAPSED TIME: 00:00:42 CP.6P/-SP=C20.1JIM.C20.1JCP

CPBUG1 - MACRO HIII 27-MAR-80 14:41 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

```
.∓ITLE.GPBUG1
    000000
 2.
                                                                           .PSECT CPBUG1
3456789
10
                                                                          HARDWARE-QUERY-RESOLVER-'MANUAL' DEBUGGING AÌDS
                                                                          CONTROL PROCESSOR TEST ROUTINES.
                                                                          COMMANDS:
                                                                          ΑT
                                                                                        SET-BREAKPOINT
                                                                                        REMOVE BREAKPOINT
LOAD MICROPROCESSOR REGISTERS
PRINT MICROPROCESSOR REGISTERS
                                                                          OF
                                                                          ĹR
11
                                                                                        \begin{array}{l} {\tt SINGLE} \cdot {\tt STEP} \cdot {\tt A} \cdot {\tt NUMBER} \cdot {\tt OF} \cdot {\tt TIMES} \cdot \\ {\tt SINGLE} \cdot {\tt STEP} \cdot \end{array}
13
                                                                          PC
15
16
17
                                                                *************
18
19
                                                                          DISCLAIMER:
                                                                          DISCLAIMER:
IN ORDER FOR THE BREAKPOINT ROUTINES TO WORK PROPERLY
THERE MUST BE A PIPELINE REGISTER ONLY CLOCK, THIS
WOULD ALLOW THE CHANGING OF PLR CONTENTS WITHOUT CAUSING AN INSTRUCTION TO BE EXECUTED, AS IT STANDS NOW, THE PIPELINE REGISTER CLOCK IS TIED TO THE SEQUENCER CLOCK, WHEN A BREAKPOINT HAS BEEN REACHED, ANY OPERATION INVOLVING A PLR CLOCK (EG, PRINTING MICROPGM MEMORY) WILL EXECUTE THE INSTRUCTION IN THE PLR. THE 2900 SEQUENCER STACK IS ALSO SOMETIMES CHANGED.
20
21
22
23
24
25
26
27
28
29
                                                                *************
30
     000000
                   000000
                                                             SSCNT: .WORD
                                                                                                                                  :NUMBER-OF TIMES-TO-SINGLE-STEP
     000002.
                   000000
                                                                           .WORD
                                                                                                                                  ; WHERE · TO · START · SINGLE · STEPPING
33
34
                                                                          DEBUGGING - ROUTINES -
35
36
37
38
                                                                          SET BREAKPOINT
                                                                          EG. CP>AT-22
     000004
                                                                                                                                  ;LOOK:FOR:BKPT:ADDR:IN:COMMAND LINE:
;OK: CONVERT:BKPT:ADDRESS:
;NOTHING:THERE:
40
     000004
                                                                          CALL
                                                                                        FIND
41
     000010
                   103004
                                                                          BCC -
                                                                                         1$
42
     000012
                                                                          CALL
                                                                                        ERR4
     000016
                                 000000G
                                                                           JMP
                   000167
                                                                                                                                  CONVERT BKPT ADDRESS
OK, CONTINUE
ERROR ON CONVERSION
44
     000022
                                                             i$:
                                                                           CALL
                                                                                        PACK
                   103004
45
     000026
                                                                          BCC
                                                                                         2$
     000030
                                                                                         ERR5
46
                                                                           CALL
     000034
                   000167
                                 000000G:**** ******
                                                                           JMP
                                                                                                                                  :IS-START-ADDRESS-IN RANGE
:YES, CONTINUE-
:ADDR-OUT-OF-RANGE-
48
     000040
                   026767
                                 000000G-000000G-2$:
                                                                           CMP
                                                                                         CSHIGH, BINWD
                                                                          BGT.
CALL
49
     000046
                   003004
                                                                                         34
                                                                                         ERR10
50
     000050
     000054
                                                                           JMP
                   000167
                                 000000G
52
                                                                                         #<CBKCLKEN>,-(SP)
                                                                           MGM
                                                                                                                                   SET - CP - CNTL - FOR THREAKPOINT
53
     000060
                                                             3$:
                   012746
                                 000400
                                                                                                        000064
                                                                           CALL
                                                                                         CPCR
54
                                                                                                                                                              INTO LOAD BUS
55
     000070
                   016746
                                 000000G
                                                                           MOV.
                                                                                         BINWD,-(SP)
                                                                           CALL
56
57
                                                                                         LBCP
     000074
                   052767
                                 000000G · 000000G
                                                                                                                                                           BKPT SET
     0020100
                                                Approved For Release 2005/07/12
```

```
0 M1110 27-MAR-80 14:41 PAGE 5-1 Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                                JMP···· CPXX
              000167
                            000000G----
59
60
                                                                REMOVE·BREAKPOINT·(DISABLE)
61
62
63
64
                                                                CP>OF
65
    000112
                                                    OF2::
                                                                                                               CLEAR BREAKPOINT FLAG
SEND 0 TO CP CNTL REG
EXECUTE TRANSFER
CLEAR CSR2
                                                                            #BREAK, BASE
                                                                BIC.
    000112
                042767
                            000000G - 000000G
                                                                            -(SP)
                                                                CLR.
67
    000120
                005046
                                                                            CPCR
    000122
                                                                CALL
68
                                                                CLR.
JMP.
69
                 905067
                             176422
                                                                            QR$CR2
                                                                                                               :GET · NEXT · COMMAND
70
71
72
73
74
75
76
77
78
    000132
                000167
                            000000G
                                                                                                                                                      - <sub>2</sub> €4
                                                                \texttt{LOAD} \cdot \texttt{ALL} \cdot \texttt{CP} \cdot \texttt{REGISTERS} \cdot \texttt{WITH} \cdot \texttt{THE} \cdot \texttt{SAME} \cdot \texttt{PATTERN} \cdot \texttt{CP>LR} \cdot \texttt{FFFF} \cdot
    000136
000136
                                                    ĹR2::
                                                                            FIND
                                                                                                                ;LOOK:FOR:PATTERN:IN COMMAND:LINE
;OK: CONVERT:PATTERN
;NOTHING:THERE:
                                                                 CALL
     000142
                 103004
                                                                            1$
                                                                            ERR4
    000144
000150
                                                                 CALL
 80
                            000000G
                                                                 JMP.
                                                                            CPXX
 81
                 000167
                                                                                                                :CONVERT.PATTERN.(SET.UP.*BINWD*)
 82
     000154
                                                     1$:
                                                                            PACK
                                                                                                                OK, CONTINUE:
ERROR ON CONVERSION
 83
     000160
                 103004
                                                                 BCC.
                                                                            2$
                                                                            ERR5
84 000162
85 000166
                                                                 CALL
                 000167
                             000000G
                                                                 GALL SUBROUTINE IN CP TO LOAD REGISTERS
 87
                                                     :
 88
                                                     2$:
                                                                 MOV
                                                                             #16..R4
                                                                                                                ;16 REGISTERS
 89
     000172
                 012704
                                                                                                                REGISTER INDICATOR:
;LOAD A CP REGISTER:
;INC TO NEXT REG
     000176
                 005000
                                                                 CLR-
                                                                            RØ
                                                                            LDREG -
                                                     34:
 91
     000200
                                                                 CALL
                 005200
                                                                 INC-
                                                                             RØ
 92
     000204
                 005304
                                                                             R4
                                                                                                                ;FINISHED ALL REGS ?
 93
     000206
     000210
                 001373
                                                                 BHE
                                                                             3$
                                                                                                                :NO. CONTINUE
                                                                 JMP.
                                                                            CPXX
 95
     000212-
                 000167
                             000000G
 96
 97
                                                                 PRINT-CP-REGISTERS-
                                                                 CP>RG-
 99
                                                                 CALL SUBROUTINE IN CP TO READ REGISTERS
100
101
     000216
                                                     RG2::
                                                                                                                :PRINT-IN-2-SETS OF-8 REGS-EACH
                                                                 MOV-
                                                                             #2,R4
104 000216
                 012704
                             000002:
                                                                                                                :REGISTER · INDICATOR ·
                                                                 CLR
                                                                             RØ
105
     000222
                 005000
                                                                                                                :R5 -> PRINT LINE
:PRINT 8 REGS ON A LINE
:READ A CP REGISTR
:CONVERT TO ASCIJ
:BUMP :RRINTATINE POINTER
:BUMP :RRINTATINE POINTER
:BUMP :REG : INDICATOR
     000224
                 012705
                             000000G
                                                     1$:
                                                                 MOV
                                                                             #PRINT, R5
186
     000230
                                                                 MOV
                                                                             #8.,R3
197
                                                                             REREG -
108
     000234
                                                     2$:
                                                                 CAL...
                                                                             UNPK
                                                                 CALL
199
     000240
110
     000244
                                                                 INC
                                                                             R5
                 005205
                                                                             RA
     000246
                 005200
                                                                 THC
                                                                             R3
                                                                 DEC
112.000250
113 000252
                 005303
                                                                                                                :STAY-ON-CURRENT-LINE-
:WRITE-LINE-TO-CONSOLE
                 001370
                                                                             CONSOL -
114 000254
                                                                 CALL
```

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CPBUG1 - M

```
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      115 000260
                       005304
                                                                      DEC ...
                                                                                 R4
                                                                                                                    :DO-SECOND SET-OF-8
                                                                      BNE -
                                                                                  1$
      116
           000262
                       001360
                                                                      JMP
                                                                                 CPXX
                                   000000G
      117
           000264
                       000167
      118
                                                                      \begin{array}{l} {\tt SINGLE} \cdot {\tt STEP} \cdot {\tt A} \cdot {\tt NUMBER} \cdot {\tt OF} \cdot {\tt TIMES} \cdot \\ {\tt CP} \mathbin{\gt{PC}} \cdot {\tt 4} \end{array}
      120
      121
122
      123
                                                          PC2::
      124 000270
125 000270
126 000274
                                                                                                                     :LOOK-FOR-COUNT-IN-COMMAND-LINE
                                                                      CALL
                                                                                  FIHD
                                                                                                                     OK, CONTINUE
                                                                                  1$
                       103004
                                                                                  FRR4
                                                                                                                     :COUNT MISSING
      127
           000276
                                                                      CALL
                                                                      JMP .
                                                                                  CPXX
      128-000302-
129-000306
                                   000000G
                       000167
                                                                                                                     ;CONVERT.COUNT.
;OK, CONTINUE.
;ERROR.ON.CONVERSION
                                                                      CALL
                                                                                  PACK
                                                           1$:
      130
            000312
                       103004
                                                                      BCC.
      131
            000314
                                                                      CALL
                                                                                  EPP5
                                   000000G
                                                                      JMP .
      132
           000320
                       000167
                                                                                  CPXX
      133
                                                                                                                     ;COUNT:=:0 ?:
;NO. CONTINUE:
;COUNT:MUST:BE:GT:0
      134
            000324
                       005767
                                   000000G
                                                           2$:
                                                                      TST
                                                                                  BINUD .
           000330
000332
      135
                       001004
                                                                      BNF .
                                                                                  3$
                                                                                  ERR5
                                                                      CALL
      136
            000336
                        000167
                                                                      JMP -
                                                                                                                     :SAVE·COUNT·
;ENTER·SS·COMMAND
                                                                      MOV.
       138
            000342
                        016767
                                   000000G · 177430
                                                           3$:
                                                                                  BIHWD, SSCHT
                       000460
                                                                                  SSCLR-
      139
            000350
       140
       141
                                                                      SINGLE-STEP
      142
143
                                                                      CP>SS·6
       144
                                                                      CP>SS-6 2
       145
      146
147
       148
            000352
                                                                                                                     :LOOK.FOR.START.ADDR IN.COMMAND.LINE:
:NONE:THERE. USE:CURRENT.MAR.
:CONVERT.START.ADDRESS.
            000352
                                                                      CALL
                                                                                  FIND
                                                                                  SSCLR:
       150
            000356
                        103455
                                                                      BCS -
                                                                       CALL
                                                                                  PACK
       151
            000360
                                                                                                                     OK, CONTINUE
       152-000364
                        103004
                                                                                                                     ; ERROR · ON · CONVERSION
            000366
                                                                       CALL.
                                                                                  ERR5
       154
            000372
                        000167
                                   000000G
                                                                       JMP
                                                                                  CPXX
       155
                                   000000G 000000G 1$:
                                                                       CMP
                                                                                  CSHIGH, BINWD.
                                                                                                                     :IS-START-ADDRESS-IN RANGE
       156
            000376
                        026767
                                                                                                                     ;YES, CONTINUE.
;OUT.OF.RANGE.HIGH.
            000404
                        003004
                                                                      BGT-
                                                                                  2$
ERR10
       158 000406
                                                                      CALL
       159
                        000167
                                   000000G
                                                                       JMP
            000412
       160
                                                                      SS START-ADDRESS FOUND AND CONVERTED. NOW LOOK FOR COUNT (NUMBER OF SINGLE STEPS). EG. IN THE COMMAND: CP>SS-6 2
       161
       162
      163
164
                                                                       LOOK FOR THE 121
                                                                                                                      :SAVE-START-ADDRESS-
:LOOK-FOR-COUNT-IN-COMMAND-LINE-
            000416
000424
                        016767 .000000G.177356
                                                                       M0-7-
                                                                                  BINWD, SSTRT.
       166
                                                                                  FIND
                                                                       CALL
       167
            000430
                                                                       BCS -
                                                                                  5$
       168
                        103421
                                                                                  PACK
       169
            000432
                                                                       CALL
                                                                                               : OK. CONTINUE -- - 4 1.

: ERROR - ON - CONVERSION

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```

3\$

ERR5

CALL

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103004

000436

000440

41 PAGE 5-3 Approved For Release 2005/07/12CIA-RDP85-00514R000200020001-3 172 000444 000167 000000G 173 TST: BIHWD :COUNT - = 0 ? - ;NO, CONTINUE 174 000450 005767 000000G 3\$: 175 000454 BNE 001004 4\$ COUNT MUST BE GT 0 176 177 000456 CALL ERR5 000462 000167 000000G TMP. CPXX BINWD, SSCHT 178 000466 016767 000000G-177304 4\$: MOV :SAVE - COUNT -179 SEQUENCE: UP: TO: SINGLE: STEP: ADDRESS: (IF: NECESSARY) SINGLE: CLOCK ALL: TO: EXECUTE: ONE: INSTRUCTION: NB. SINGLE: STEP: CANNOT BE: USED: IN: SENDING: THE: 180 181 182 : 183 BCL ADDRESS TO THE CP. 184 :PROVIDE START ADDRESS FOR SEQUENCER: :SEQUENCE ONLY UP TO START ADDRESS: :CLEAR CP CONTROL REG 000474 MOV. SSTRT,-(SP) 185 016746 177302 5\$: 000500 SEQUS-186 CALL: 000504 187 005046 CLR -188 000506 CALL CPCR 189 190 SET-UP-FOR-SINGLE-CLOCK-191 000512 000520 012767 012746 :SET-SEARCH-MODE-:CLEAR-PPS AND-CP-NO-CLOCKS :CLEAR-SELECT-BITS-192 · 193 100000 036000 SSCLR: 176422 MOV #Q\$SM,QR\$CR2 3\$: MOV-#<Q\$CNC+Q\$RNC>,-(SP) 194 000524 052716 000360 BIS. #<Q\$CSEL>,(SP) 195 000530 052716 001001 BIS #<Q\$LBD+Q\$LBP>.(SP) :CLEAR · DRIVE · AND · PULSE 000534 196 012746 020000 MOV. #Q\$CSP,-(SP) ;SET-SINGLE-CLOCK-ALL-197 000540 CSR4 CA: L : WRITE - CSR1 000544 005046 CLR -(SP) :CLEAR - NOTH ING -199 000546 012746 036000 MOV: #<Q\$CNC+Q\$RNC>,-(SP) :SET-PPS-AND-CP-NO-CLOCKS 200 000552 CALL CSR 1 ; AND · RE-WRITE · CSR1 201 202 SINGLE-STEP-A-NUMBER-OF-TIMES-DEPENDING-UPON-THE 203 COUNT IN FIELD 'SSCHT'. 204 ÷. CLR-205 000556 005067 176422 OR\$CR2 SET LOAD MODE: 000562 005767 TST 206 177212 SSCHT. BĒQ 207 000566 001403 4\$;NO, EXIT-SS-RTN-SSCHT 208 000570 005367 177204 DEC EXECUTE NEXT INSTRUCTION 209 000574 001346 BNE SSCLR-210 211 000576 212 000602 4\$: CALL CPMP :PRINT-MICROPGM-ADDRESS 000167 000000G JMP. CPXX

CPBUG4 · · P

0.M1110

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```
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```

```
214
215
216
217
218
219
219
2000606
221
000616
222
000616
223
000622
224
000634
225
000634
226
000634
227
000646
228
000646
230
000652
231
232
                                                                                        PRINT-CP-MICROPROGRAM-ADDRESS-
                                                                        à
à
                                                                        CPMP:
                                                                                                                                                      #<CSADRD>.-(SP)
CPCR
CPLB
                                                                                        MOV.
                                                                                       CALL
CALL
MOV
BIC
MOV
                                                                                                       (SP)+,R1
#176000,R1
#PRINT,R5
                        042701
                                         176000
                        012705
                                        000000G
                                                                                       CALL
CALL
CLR
CALL
RETURN
                                                                                                       UNPK
                                                                                                       CONSOL
-(SP)
                        005046
                                                                                                       CPCR
                        000001
                                                                                                                                                                                                       20 5
                                                                                        .END
```

```
CPBUG4 M 0 M1110 27-MAR-80 14:41 PAGE 6-1 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                                                                                                                                        Q$MSET= 000004
Q$MSP-= 100000
Q$NCLK= 176000
Q$PP = 000100
Q$PPSU= 000320
Q$PP2-= 000300
Q$QHLT= 000013
002 Q$QL = 000043
Q$QLA = 000053
                                            BYTE39= 0000047
                                                                                        BYTE90= 000132
                                                                                                                                   MMOE · = · 000004
ALTICKE = · 040000
                                                                                        BYTE91=-000133
BYTE92=-000134
BYTE93=-000135
                                            BYTE4 = 000004
                                                                                                                                    MMURTE = . 000010
ALU0E - 004000
AT2 000004
                                                                                                                                   MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
                                    002 BYTE40= 000050
AT2
              000004RG
           = -010000
                                            BYTE41= 0000051
                                                                                        BYTE94= 000136
BASE - ******* GX-
BINUD = ****** GX-
                                            BYTE42=:000052
                                                                                                                                   MSYN = 000040
N = 000144
OF2 000112
                                                                                        BYTE95= 000137
                                            BYTE43= 000053
                                                                                        BYTE96= 000140
BYTE97= 000141
BYTE98= 000142
BITVAL= 000000
                                            BYTE44= 000054
                                                                                                                                   = · 000001
= · 000002
                                            BYTE45= 000055
BYTE46= 000056
BITO
BIT1
BIT10
                                                                                                                                                                        002.Q$QLB.=.000054
Q$QLR.=.000001
Q$QW =.000042
                                            BYTE47 = · 000057
                                                                                        BYTE99= 000143
           = 002000
                                                                                        BYTVAL= 000144
CB:(ALL= 001000
CBKCLK= 000400
BIT11 = 004000
BIT12 = 010000
                                            BYTE48= 000060
BYTE49= 000061
BYTE5 = 000005
                                                                                                                                                                                Q$RDCD=-000042
Q$RDMD=-000006
BIT13
           = 020000
                                            BYTE50=-0000062:
BYTE51=-000063
BYTE52=-000064
                                                                                        CHOBRE = 100000
CONSOL = ****** GX
          = 040000
= 100000
                                                                                                                                                                                Q$REBK = . 001000
Q$RHC - = . 006000
Q$RSC - = . 004000
BIT15
           = 000004
                                                                                        CPCCEN= 010000
BIT2.
                                                                                                                             = 000010
= 000020
                                                                                        CPCR: =: ****** GX:
CPLB: =: ***** GX:
CPMP: 000606R:
                                            BYTE53 = 000065
BYTE54 = 000066
                                                                                                                                                                                Q$RSET= 000010
BIT4
                                                                                                                                                                                Q$KSE!=-000010
Q$SM =-100000
Q$SP =-000120
Q$SP2-=-000340
REREG:=-********** GX-
           = . 000040
                                            BYTE55= 0000067
BIT5
                                            BYTE56=-000070
BYTE57=-000071
BYTE58=-000072
                                                                                        CPREAD = 040000
CPWRTE = 020000
CPXX = *********** GX
           = .000100
 BIT6
           = · 000200
= · 000400
BIT7
                                                                                                                                   BITS
           = 001000
                                            BYTE59= 000073
                                                                                        CSADRD= 000004
                                                                                                                                                                                RGQ.EH= 000200
BIT9
                                                                                        CSHDRD=:000004
CSECCI=:100000
CSHIGH=:********* GX-
CSOE = :000040
CSRI = :*********** GX-
CSURTE=:000100
DBR:RD=:000001
                                                                                                                                                                                RGO.VA= 020000
RG2 000216
                                            BYTE6 = 000006
BYTE60 = 000074
 BREAK -- - ****** GX -
                                                                                                                                                                                           000216RG⋅-- 0002⋅^^
BYTE0 = 000000
BYTE1 = 000001
                                                                                                                                                                                SEQCS: = ******* GX:
SEQ:CI = 000010
SSCLR: 000512R:
                                            BYTE61 = 000075
 BYTE10= 000012
                                            BYTE62= 000076
                                                                                                                                                                                                                    002
BYTE!1=-000013
BYTE!2=-000014
BYTE!3=-000015
                                            BYTE63= 000077
BYTE64= 000100
                                                                                                                                                                                               000000R ...
                                                                                                                                                                                 SSCNT.
                                                                                                                                                                                                                     002
                                                                                        DBR:RD= 000001
DB$CPP= 001457
DB$SPT= 000026
DB$TPC= 000023
DI3PGS= 100000
                                            BYTE65= 000101
                                                                                                                                                                                 SSTRT
                                                                                                                                                                                               000002R
000352RG
                                                                                                                                                                                                                     002.
BYTE13=-000013
BYTE14=-000016
BYTE15=-000017
BYTE16=-000020
BYTE17=-000021
                                            BYTE56= 000102
BYTE67= 000103
                                                                                                                                                                                SS2 -
                                                                                                                                                                                                                     002
                                                                                                                                                                                S$CLR = 000000
S$LA = 000001
S$OB = 000005
= 000006
                                                                                                                                                                                 S$CLR - = . 000000
                                            BYTE68= 000104
                                            BYTE69=-000104
BYTE69=-000105
BYTE7 =-000106
BYTE71=-000107
                                                                                                                                    Q$DMA·=:000001
Q$ENBK=:040000
Q$ENOP=:020000
                                                                                        DMAAWR= 000005
DMARRD= 000003
BYTE18= 0000022
BYTE19= 000023
BYTE2 = 000002
                                                                                        | DMARRU = 000003
| DMARWR = 000004
| ENBR. = 010000
| ERRIO = ********** GX-
| ERR4 = ********* GX-
| ERR5 = ********* GX-
                                                                                                                                                                                          = 0000004...
= 000007
= 000010
= 000014
                                                                                                                                                                                 S$QX
                                                                                                                                    Q$ENOP = 020000
Q$FAL = 004000
Q$FC = 000045
Q$FC = 000044
Q$FP = 000046
Q$ICP = 000002
Q$ICP = 000003
Q$IHB = 000003
Q$IHRL = 000003
                                                                                                                                                                                 S$SR
                                             BYTE72=-000110
BYTE73=-000111
BYTE74=-000112-
 BYTE20= 0000024
                                                                                                                                                                                 S$S1
S$S2
 BYTE21 = 000025
BYTE22 = 000026
                                                                                                                                                                                 TD$CTR=-176370
                                                                                         FIND = ******** GX**
LBCP = ******* GX**
LDREG = ********* GX**
                                                                                                                                                                                 TD$CTW= 176360
TD$INL= 004000
 BYTE23= 000027
                                             BYTE75= .000113
 BYTE24= 000030
BYTE25= 000031
                                             BYTE76= 000114
BYTE77= 000115
                                                                                                                                                                                 TD$MEM= 000270
                                                                                                                                                                                 TD$0AR= 176344
TD$0TR= 176346
TD$0RD= 000274
 BYTE26= 000032
                                             BYTE78= 000116
                                                                                         LOC.EN= 000100
                                                                                         LOS.WA= 040000
LOS.WB= 100000
LR2 000136F
                                            BYTE79=-000117
BYTE3 =-000010
BYTE80=-000120
BYTE81=-000121
 BYTE27= 000033
                                                                                                                             Q$LBD - - 001000
002 · Q$LBDP - 001001
 BYTE28=:000034
                                                                                                     000136RG
                                                                                                                                                                                 TD$SW = 176376
 BYTE29=-000035
BYTE3 =-000003
                                                                                         MAREH 1 = . 000001
                                                                                                                                     Q$LBP - = - 000001
                                                                                                                                                                                 TD$TAR= 176372
                                                                                                                                     Q$LDCD= 000003
 BYTE30= 000036
                                             BYTE82= 000122
                                                                                         MAREN2 = - 004000
                                                                                                                                                                                 TD$TAW= 176362
                                                                                                                                     Q$LDMD=.000004
Q$LDPP=.002000
                                                                                         MARLOD= 010000
MAROUT= 000002
MAR.LO= 002000
                                                                                                                                                                                 TD$TDR=:176374
 BYTE31= 000037
                                             BYTE83=-000123
                                                                                                                                                                                 BYTE32= 000040
                                             BYTE94= 000124
                                                                                                                                     Q$LHP.=.010000
Q$MNC.=.140000
Q$MR.=.000052
 BYTE33= 000041
BYTE34= 000042
                                             BYTE85= 000125
                                             BYTE86 = . 000126
                                                                                         MAR.OU= 000040
                                                                                         MBKALL = 001000
MBKCLK = 000400
 BYTE35= 000043
                                             BYTE87=-000127
                                                                                                                                                                                  T$BSO - = 100000
                                                                                                                                     Q$MRP - = - 000040
BYTE36= 000044
BYTE37= 000045
                                             BYTE08=-000130
                                                                                                                                     Q$MRP2= 000240
Q$MSC = 040000
                                                                                         MMADRD = 000100
                                             BYTE89=-000131
 BYTE38= 000046
                                             BYTE9 = 000011
                                                                                         MMLEFT= 000002
                                                                                                                                                                                  T$RTAR = - 000030
                                                             Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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CPBUG1 - MACRO - M1110 27-MAR-80 14:41 PAGE 5-2
SYMBOL - TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
 T$8TD - = - 002000
                                      T$SEG2=-000001
                                                                          WORD27= 000066
WORD28= 000070
                                                                                                               WORD52=-000150
                                                                                                                                                    WORD78=-000234
WORD79=-000236
WORD8 =-000020
 T$CD: = 000100
T$CLK: = 002000
                                     T$SEG3=-000002
T$SO---000001
T$UBUS=-100000
                                                                                                               WORD53=-000152
WORD54=-000154
                                                                           WGRD29-000072
 T$DISK= 000200
                                                                          WORD3 = 000006
                                                                                                               WORD55= 000156
                                                                                                                                                    WORD80= 000240
 T$DRD - = 000004
T$EMEM = 010000
                                      T$1CLK=-000400
                                                                          WORD30= 000074
                                                                                                               WORD56= 000160
                                                                                                                                                    WORD81= 000242
WORD82= 000244
                                      T$8BEN= ∙000020
                                                                           WORD31= 000076
                                                                                                               WORD57=-000162
WORD58=-000164
                                     UBD: IN = 000020
UNPK = ********* GX-
WORD0 = 000000
WORD1 = 000002
 T$F$AA= 000000
                                                                          WORD32= 000100
                                                                                                                                                    WORD83-000246
 T$FSAB=-000004
T$FSAC=-000014
                                                                          WORD33= 000102
WORD34= 000104
                                                                                                                WORD59= 000166
                                                                                                                                                    WORD84= 000250
                                                                                                               WORD6 = 000014
WORD60= 000170
                                                                                                                                                    WORD85= 000252
 T$FSB2=-000010
                                                                           WORD35 - 000106
                                                                                                                                                    WORD86= 000254
 T$IB· = 0000026
                                     WORD10--000024
                                                                          WORD36 - 000110
WORD37 - 000112
                                                                                                               WORD61= 000172
                                                                                                                                                    WORD87= 000256
 T$IBAR=-000024
T$IBE-=-020000
T$IBF-=-040000
                                      WORD11= 000026
                                                                                                               WORD62= 000174
                                                                                                                                                    WORD88 - 000260
                                     WORD12= 000030
WORD13= 000032
WORD14= 000034
                                                                          WORD38= 000114
                                                                                                               WORD63= 000176
                                                                                                                                                    WORD89= 000262
                                                                          WORD39= 000116
                                                                                                               WORD64= 000200
WORD65= 000202
WORD66= 000204
                                                                                                                                                    WORD9 = 000022
 T$ICD - = - 000040
                                                                          WORD4 = 000010
                                                                                                                                                    WORD90= 000264
 T$MODE= 004000
                                     WORD15= 000036
                                                                          WORD40= 000120
                                                                                                                                                    WORD91=-000266
 T$08 - - 000036
T$08E - - 004000
                                      WORD16= 000040
                                                                          WORD41= 000122
                                                                                                               WORD67= 000206
                                                                                                                                                    WORD92=-000270
                                     WORD17= 000042
                                                                          WORD42= 000124
                                                                                                               WORD68= 000210
                                                                                                                                                    WORD93= 000270
 T$0BF · = · 010000
                                     WORD18=-000044
WORD19=-000046
WORD2-=-000004
                                                                          WORD43= 000126
                                                                                                               WORD69=-000212
WORD7 =-000016
                                                                                                                                                    WORD94= 000274
 T$0BRA= 000034
                                                                          WORD44= 000130
 T$0BWA= 000032
T$0UTA= 100000
                                                                                                                                                    WORD95= 000276
                                                                          WORD45= 000132
WORD46= 000134
WORD47= 000136
                                                                                                               WORD70= 000214
                                                                                                                                                    WORD96= 000300
WORD97= 000302
                                     WORD20= 000050
WORD21= 000052
WORD22= 000054
                                                                                                               WORD71= 000216
WORD72= 000220
WORD73= 000222
 T$RBD0=.000200
                                                                                                                                                    WORD98= 000304
 T$RHB - - 000040
                                                                          WORD48= 000140
T$RSET= 040000
T$SC = 000002
T$SCLK= 020000
T$SEG1= 000000
                                                                                                                                                    WORD99= 000306
                                     WORD23= 000056
                                                                          WORD49= 000142
WORD5 = 000012
                                                                                                               WORD74= 000224
                                                                                                                                                    WRDVAL = . 000310
                                     WORD24=-000060
WORD25=-000062
                                                                                                               WORD75= 000226
WORD76= 000230
WORD77= 000232
                                                                                                                                                    XTREAD= 001000
                                                                          WORD50= 000144
                                                                                                                                                    XTWRTE = . 000400
                                     WORD26= 000064
                                                                          WORD51 = . 000146
 . ABS.
            000000
                             000
            000000
                             001
CPBUG1
            000654
                             002
ERRORS DETECTED:
                           0
VIRTUAL MEMORY-USED: 3220 WORDS- (-13 PAGES)
DYNAMIC-MEMORY: 3860 WORDS- (-14 PAGES)
ELAPSED-TIME: 00:00:44
UPBUG1.EPBUG1-SP=[20.1]IM.[20.1]CPBUG1
```

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CPBUG2 MACRO M1110 27+MAR-80 14:42 PAGE 5
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```
.FITLE-GPBUG2
.PSECT-CPBUG2
234567890
i0
     000000
                                                                            MARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS.
                                                                            CONTROL PROCESSOR TEST ROUTINES
                                                                            *****
                                                                                             PROTOTYPE VERSION
                                                                            COMMANDS:
                                                                                          PROCEED FROM BREAKPOINT.
                                                                            FR
                                                                                          FREE RUN-
13
14
15
                                                                  16
17
18
                                                                            DISCLAIMER:
                                                                            DISCLAIMER:
IN ORDER FOR THE BREAKPOINT ROUTINES TO WORK PROPERLY.
THERE MUST BE A 'PIPELINE REGISTER ONLY CLOCK, THIS
WOULD ALLOW THE CHANGING OF PLR CONTENTS WITHOUT CAUSING
AN INSTRUCTION TO BE EXECUTED, AS IT STANDS NOW, THE PIPE-
LINE REGISTER CLOCK IS TIED TO THE SEQUENCER CLOCK, WHEN,
A BREAKPOINT HAS BEEN REACHED, ANY OPERATION INVOLVING
A PLR CLOCK (EG, PRINTING MICROPGM MEMORY) WILL EXECUTE.
THE INSTRUCTION IN THE PLR, THE 2900 SEQUENCER STACK IS:
ALSO SOMETIMES CHANGED.
i9
ALSO SOMETIMES CHANGED.
                                                                  .MCALL · WTSE$S,CLEF$S,WTLO$S,RDAF$S
                                                                             .NLIST.
                                                              MRPMSG:
HBMSG:
     000000
                                       122
                                                     120
                                                                            .ASCIZ
                                                                                          /MRP BREAKPOINT/-
                                                                             .ASCIZ.
35
     000017
                         110
                                       111
                                                     124
                                                                                          /HIT LIST INTERRUPT/
36
37
38
                                       122
115
     000042
                         110
                                                     114
                                                              HRLMSG:
                                                                            .ASCIZ
                                                                                          ZHRL INTERRUPTZ
     000060
                         104
                                                     101
                                                              DMAMSG:
                                                                            .ASCIZ
                                                                                          /DMA INTERRUPT/
     000076
                         125
                                       116
                                                     111
                                                              UNMSG:
                                                                            .ASCII
                                                                                          /UNIDENTIFIED INTERRUPT. CSR2 = //
                                                                            .EVEN.
.NLIST CND
40
```

```
CPBUG2 - M
                                                        27-MAR-80 14:42 PAGE-6
                                 0 · M1 1 10
                                                                                         Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
             43
                                                                                                                                 DEBUGGING - ROUTINES -
             44
             45
             46
47
                                                                                                                                 PROCEED: THE 'GO' COMMAND RUNS THE CP MICROCODE ONLY TO RUN BOTH CP AND MRP USE 'FR?
             48
                                                                                                                                  EG. CP>GO
             51
52
53
                                                                                                                                            CP>G0 - 22
                     000136
                                                                                                            G02::
              54
                      000136
                                                                                                                                  CALL
                                                                                                                                                                                                                        ;LOOK.FOR.START.ADDRESS.
              55
56
                                                                                                                                 BCS.
CALL
                     000142
                                            103443
                                                                                                                                                       CGO.
                                                                                                                                                                                                                        :NONE, GO FROM PRESENT ADDRESS
                     000144
                                                                                                                                                                                                                        CONVERT START ADDRESS
                                                                                                                                                       PACK
                      000150
                                            103004
                                                                                                                                  BCC -
                                                                                                                                                       1$
              58
                     000152
                                                                                                                                                       ERR5
                                                                                                                                                                                                                        ERROR ON CONVERSION
              59
                      000156
                                            000167
                                                                 000000G
                                                                                                                                  JMP
                                                                                                                                                       CPXX
              60
                      000162
                                                                 000000G · 000000G · 1$:
                                                                                                                                                                                                                        :IS-START-ADDRESS-IN RANGE
:YES, CONTINUE-
:OUT-OF-RANGE-HIGH-
              61
                                                                                                                                                       CSHIGH, BINWD
              62
                     000170
                                            003004
                                                                                                                                                       ERR10
              63
                      000172
                                                                                                                                  CALL
                                            000167
                      000176
                                                                                                                                  JMP.
                                                                                                                                                       CPXX
              65
66
67
                                                                                                                                   IF THE COMMAND IS:
                                                                                                                                 IF THE COMMIND 13.

CP>GO 0

THEN SCAN THE COMMAND LINE FURTHER FOR AN THE COMMAND LINE FURTHER FOR FURTHER FURTHER FOR FURTHER FURTHE
              68
69
70
              71
72
73
74
                                                                                                                                  BE LOOKED AT.
                      000202
                                            005767
                                                                 000000G
                                                                                                                                   TST.
                                                                                                                                                       BINWD
                                                                                                                                                                                                                        :GO-FROM-ZERO-
                                                                                                                                                                                                                       ;NO; CONTINUE:
;LOOK;FOR:'N' IN:COMMAND:LINE
;NOT:THERE, ERASE:QLB:
;MAKE:SURE IT:IS:AN:'N'
                      000206
                                            001015
                                                                                                                                  BNE
                                                                                                                                                       4$
               75
                      000210
                                                                                                                                                       FIND
                                                                                                                                  CALL
               76
77
                       000214
                                                                                                                                  BCS
                                                                                                                                                       4$
                      000216
                                            122711
                                                                 000116
                                                                                                                                  CMPB
                                                                                                                                                        #*N, (R1)
               78
                      000222
                                            001404
                                                                                                                                  BEQ.
                                                                                                                                                       3$
                                                                                                                                                                                                                        ;OK, CONTINUE.
                      000224
                                                                                                                                                       ERR12
                                                                                                                                  CALL
              80
                      000230
                                            000167
                                                                 000000G
                                                                                                                                   JMP -
                                                                                                                                                                                                                        ;BAD - COMMAND -
                                                                                                                                                                                                                        :SET FLAG EOR NO OLD EMASE
:PROVIDE START ADDRESS FOR SEQUENCER
:SEQUENCE:ONLY UP TO START ADDRESS
              81
                      000234
                                            052767
                                                                 000000G.000000G.3$:
                                                                                                                                  BIS.
                                                                                                                                                        #NEQLB, BASE
                     000242
              82
                                            016746
                                                                 000000G
                                                                                                                                  MOV.
                                                                                                             45:
                                                                                                                                                       BINWD,-(SP)
                                                                                                                                                       SEQUS.
                      000246
                                                                                                                                  CALL
              84
85
                                                                                                                                  SET UP TO FIELD INTERRUPTS ARE HIT BUFFER INTERRUPTS, HRL INTERRUPTS, AND DMA INTERRUPTS.
              86
               87
              88
89
                      000252
                                                                                                            OG0:
                      000252
                                                                  000600
                                                                                                                                  MOV-
                                                                                                                                                        #<Q$CHB+Q$CHRL>.QR$CR2.;CLEAR.OPERATIONAL.INTERRUPTS
                                            012767
                                                                                        176422
              91
92
                                                                                                                                                        #Q$REBK,QR$CR2
                                                                                                                                                                                                                        ;RE-ARM INTERRUPTS
               93
                                                                                                                                  READ MICROPGM ADDRESS TO SEE WHERE SEQUENCER.
              94
95
                                                                                                                                   IS CURRENTLY SITTING
                      000266 012746 000004
                                                                                                                                  MOV.
                                                                                                                                                        #CSADRD,-(SP)
                                                                                        CALL CPCR :ENABLE CS ADDRESS - ALSO REINHIBIT BROWN CALL CPLB :REQUEST CP TO LOD BUS :

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                      000272
                      000276
```

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     99
         000302
                  005046
                                                        GI-R
                                                                  -(SP)
                                                                                              : GLEAR THE CONTROL REGISTER
     100
         000304
                                                        CALL
                                                                  CPCR
                                                                                                                                   NS.
     101
         000310
                  012601
                                                                  (SP)+_{*}R1
                                                                                              :CP-WORD-RETURNED-ON STACK
     102-000312-
                  042701
                            176000
                                                                  #176000.R1
                                                                                              ; CLEAR · UNUSED · BITS ·
    103
                                                         IF GO:FROM:ZERO, INITIALIZE:PPS:AND:CLEAR:HIT:BUFFER
     105
     106 000316
                  005701
                                                        TST
                                                                                              :START-FROM-ZERO
         000320
                   001011
                                                        BNF
                                                                  185
                                                                                              :NO. CONTINUE
     108
         000322
                                                                 PPINIT.
                                                        CALL
                                                                                              :DO:IT:
     109
         000326
     110
                   012700
                            авававь
                                                        MOV.
                                                                  #HLB,R0
                                                                                              :POINT:TO:HIT:BUFFER
         000332
                   016702
     111
                            000000G
                                                        MOV:
                                                                                              :LOAD NUMBER OF WORDS IN HIT BUFFER
:CLEAR HIT LIST
                                                                  BCL,R2
         000336
                   005020
                                               20$:
                                                         CLR
                                                                  (R0) +
     113
         000340
                  005302
                                                        DEC
         000342
                  001375
     114
                                                        BNE
                                                                  20$
                                                        IF A-BREAKPOINT-IS-IN-EFFECT, BRANCH-TO-CODE.THAT.PREPARES
TO FIELD-A-BREAKPOINT-INTERRUPT, ELSE-START-FREE-RUN
     117
     118
                                                        WITHOUT BREAKPOINTS.
     119
                                                                                              :PROCEED FROM BREAKPOINT:
         000344
                            000000G 000000G 10$:
                                                                  #BREAK,BASE
     120
                                                        BIT
     121
         000352
                  001075
                                                        BNE
                            120000
000360
     122 - 000354
                   012767
                                     176422
                                                         MOM
                                                                  #<Q$SM+Q$ENOP>,QR$CR2
                                                                                              :ENABLE OPERATIONAL INTERRUPTS
     123
         000362
                   012746
                                                        MOV.
                                                                  #<Q$CSEL>,-(SP)
#<Q$LBD+Q$LBP>,(SP)
                                                                                              :CLR · SELECT · BITS ·
                                                                                              CLEAR DRIVE AND PULSE
CLEAR PPS AND CP NO-CLOCKS
         000366
                   052716
                            001001
                                                        BIS.
     125
         000372
                   052716
                            036000
                                                                  #<Q$CNC+Q$RNC>,(SP)
                                                        BIS
     126
         000376
                   005046
                                                        CLR
                                                                  -(SP)
                                                                                              :SET-NOTHING
     127
         000400
                                                        CALL
                                                                  CSR1
                                                                                              ; RE-WRITE · CSR1
     129
                                                         IF STARTING FROM ZERO, SEND THE BCL ADDRESS OVER TO
     130
                                                         THE · CP :
     131
         000404
                   005701
                                                                                              :START-FROM-ZERO-?
                                                         TST
     133
         000406
                   001026
                                                                  1$
                                                        BHE
                                                                                              ; WORD · NOT · ZERO ·
     134
         000410
                   012767
                            000001
                                      176424
                                                        MOV:
                                                                  #Q$BCL,QR$LBR
                                                                                               ;SET-ATTN-CODE-=-
         000416
     135
                   012767
                            120100
                                                                  #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.;SET.ATTN.CODE.READY
QR$CR2.R1 ;READ.CSR2
                                     176422
                                                        MOV
         000424
                   016701
                             176422
                                               11$:
                                                        MOV
                                                                  #Q⊈ATTN,R1
                                                                                              : IS ATTH BIT CLEAR
     137
         000430
                   032701
                            000100
                                                        BIT.
     138
         000434
                   001373
                                                        BNE
                                                                  11$
                                                                                              :NO, LOOP UNTIL IT IS
     140
         000436
                   012767
                            000000G::176424
                                                        MOV-
                                                                  #BCL,QR$LBR
                                                                                              :MOVE - BCL - ADDR - TO - LOD - BUS - REG -
     141
         придада
                   012767
016701
                            120040 176422
                                                        MOV-
                                                                  #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2;SET-CC-TO-CP-SLAVE-DATA-READY
QR$CR2,R1 :READ CSR2
                                                        MOV.
         000452
                            176422
     142
                                               12$:
                                                                                              ;READ CSR2
;IS·CC·TO·CP·CLEAR
         000456
                   032701
                                                        BIT
     143
                                                                  #Q$CCCP,R1
     144
         000462
                   001373
                                                                  12$
                                                                                              :NO, LOOP UNTIL IT IS
                                                        BNE
     145
                                                         PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROL
     146
     147
                                                         TO USER (IN CASE MICROCODE HANGS UP OR RUNS FOREVER)
     148
                                                         CALL SUBROUTINE THAT WAITS FOR INTERRUPTS THEM DECODES
     149
     150
     151
         000464
                                               1$:
                                                         GLEF$S: #EFN.4
                                                                                               ;CLEAR QIO EVENT FLAG
     152
                                                                                               : ISSUETOTO WORKING
     153
         000476
                                                         CALL
                                                                  HANG2
```

WINT

KILL

CALL

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:WAIT-FOR-EVENTS

. QIO

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154 000502

000506

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CPBUG2 -
              10 M1110 27-MAR-80 14:42 PAGE 6-2.
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     156
                                                           TURN-OFF-CLOCKS, SET-LOAD-MODE, PRINT-MICROPGM-ADDRESS
     157
                                                           CLR.
     159 000512
                   995946
                                                                     -(SP)
                                                                                                   : CLEAR - NOTHING
                                                                                                   ;SET-PPS-AND-CP-NO-CLOCKS
         000514
                             036000
                                                           MOV
                                                                     #< OscNC+OsRNC>.-(SP)
     169
                   012746
                                                           CALL
                                                                     CSR1
                                                                                                   :WRITE CSR
     16 i
         000520
     162.000524
                   705046
                                                           CLR.
                                                                     -(SP)
                                                                                                   SET-CP-CONTROL-REG-TO-ZERO
                                                           CALL
                                                                     CPCR
     163 000526
                                                                                                   : DO - IT-
     164
         000532
                   005067
                                                           CLR.
                                                                     QR$CR2
                                                                                                   SET LOAD MODE
         000536
                                                           CALL
                                                                     CPMP
                                                                                                   :PRINT-MICROPGM-ADDRESS
     166
167
         000542
                   000167
                             000000G
                                                           .TMP -
                                                                     CPXX
     168
     169
170
                                                           EXPECT TO HIT A BREAKPOINT.
     171
         000546
                                                 CBK:
         000546
                                                           CLEF$S: #EFN.3
                                                                                                   :CLEAR · BREAKPOINT · EVENT · FLAG
     173
     174 000560
                                                           GLEF$S: #EFN.4
                                                                                                   ;CLEAR QIO EVENT FLAG
                                                           SET-BKPT-ALLOW-BIT-IN-CP-CONTROL REG-
                                                           SET-SEARCH-MODE.
SET-FREE-RUN CLOCK-
     177
     178
     179
     180
         000572
                   012746
                             001000
                                                           MOV
                                                                     #CBKALLOW,-(SP)
                                                                                                   ;SET-CP-CONTROL-BIT
                                                                                                   ;WRITE · CP · CONTROL · WORD ·
$CR2 · ;SET · SEARCH · MODE
     181
         000576
                                                           CA...
                                                                     #<O$SM+O$ENBK+Q$ENOP>.QR$CR2 :SET-SEAR
#<O$CSEL>.-(SP) ;CLR-SELECT-BITS-
     182
         000602
                    012767
                              160000
                                       176422
                                                           MGV.
                    012746
                                                                     #<Q$CSEL>,-(SP)
#<Q$LBD+Q$LBP>,(SP)
     183
         000610
                             000360
                                                           MOV:
                                                                                                   CLEAR DRIVE AND PULSE
         000614
                   052716
                             001001
     184
                                                           BIS
     185
         000620
                   052716
                             036000
                                                           BIS
                                                                     #<Q$CHC+Q$RHC>,(SP)
                                                                                                   :CLEAR PPS AND CP NO-CLOCKS
          000624
                    005046
                                                           CLR
                                                                                                   ; SET - NOTHING -
     187
          000626
                                                           CALL
                                                                     CSR1
                                                                                                   :RE-WRITE CSR1
     188
                                                           IF STARTING FROM ZERO, SEND THE BCL ADDRESS OVER TO
     189
                                                            THE CP.
     190
     191
                                                                                                   :START-FROM-ZERO-?
         000632
                    005701
                                                           TST
     192
                                                                     R1
          000634
                    001026
                                                                      1$
     193
                                                           BHE
                                                                                                   : WORD NOT ZERO
          000636
                    012767
                              000001
                                        176424
                                                           MOV
                                                                      #Q$BCL,QR$LBR
                                                                                                   :SET-ATTN-CODE-=-1
         000644
000652
                                                                     #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.;SET.ATTN.CODE.READY
QR$CR2,R1 ;READ.CSR2
     195
                    012767
                              120100
                                        176422
                                                           MOV
     196
                    016701
                              176422
                                                  11$:
                                                           MOV:
          000656
                    032701
                                                           BIT
                                                                      #Q$ATTN,R1
                                                                                                   : IS ATTH BIT CLEAR
     197
                              000100
     198
          000662
                    001373
                                                                      11$
                                                                                                   :NO, LOOP-UNTIL-IT-IS
                                                           BNE
     199
     200
          000664
                    012767
                              000000G-176424
                                                           MOV
                                                                      #BCL,QR$LBR
                                                                                                   : MOVE - BCL - ADDR - TO - LOD - BUS - REG -
                              120040
                                                                      #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP.SLAVE.DATA.READY
     201
          000672
                    012767
                                       176422
                                                           MOM
                                                                                                   ;READ.CSR2
;IS.CC.TO.CP.CLEAR
     202.000700
                    016701
                              176422
                                                  12$:
                                                           MOV-
                                                                      QR$CR2,R1
     203 000704
                    032701
                              000040
                                                           BIT
                                                                      #Q$CCCP,R1
                                                                                                   AND LOOP UNTIL IT IS .
     204 000710
                                                                      12$
                    001373
                                                            BNE
     205
                                                            PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROL
TO USER (IN CASE MICROCODE HANGS UP OR RUNS FOREVER).
CALL SUBROUTINE THAT WAITS FOR INTERRUPTS THEN DECODES
     206
     287
     208
     209
                                                            THEM:
     210
     211
         000712
                                                  1$:
                                                                                                    :ISSUE-QIO
                                        CALL: WINT : : WAIT-FOR-INTERF
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     212.000716
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```
213
214
215
216
217
218 000722
219 000724
220 000734
221 000736
223
224 000742
225 000742
                                                                                           RESET-NO-CLOCKS-IN-CSR 1
SET-LOAD-MODE-
PRINT-MICROPGM-ADDRESS
                                                                                           GLR MOV
                         005046
                                                                                                                                                            :GLEAR-NOTHING:
:SET-PPS-AND-CP-NO-CLOCKS:
:RE-WRITE-CSR1
:SEND-0 TO CP-CONTROL-REG
                                                                                                            -(SP)
                         012746
                                         036000
                                                                                                            #<Q$CNC+Q$RNC>.-(SP)
                                                                                           CALL
CLR
                                                                                                           CSR1
-(SP)
                         005046
                                                                                           CALL
                                                                                                           CPCR
                                                                                                                                                            :D0:IT:
                        005067
012767
                                                                                          GLR:
MOV:
                                                                                                                                                            #SET-LOAD MODE:
#RE-ARM-INTERRUPTS:
#PRINT-MICROPGM-ADDRESS:
#KILL-AST:
                                         176422
                                                                                                           QR$CR2.
#Q$REBK,QR$CR2
225 000746
                                         001000
                                                          176422
226 000754
227 000760
228 000764
                                                                                           CALL
                                                                                                           CPMP
                                                                                           CALL
                                                                                                           KILL
                         000167
                                         000000G
                                                                                           JMP .
                                                                                                           CPXX
```

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0 M1110 27-MAR-80 14:42 PAGE 7
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CPBUG2 -
    230
231
                                                         FREE · RUN
    233
234
                                                         RUN-BOTH-MRP AND-CP-
                                                         EG
                                                              CPSER.
    235
                                                              CP>FR · N ·
                                                         THE . 'N' MEANS . NOT . TO . ERASE . THE . QLB'S . SO . THAT . THEY . MAY .
    237
238
                                                         BE LOOKED AT.
    240
         000770
                                                FR2::
         000770
000774
    241
                                                         CALL.
                                                                   FIND
                                                                                                :LOOK-FOR-"N" IN-COMMAND-LINE
                                                                                                ;NOT THERE, ERASE QLB ;MAKE SURE IT IS AN 'N'
    242
                   103412
                                                         BCS:
                                                                   20$
    243
         000776
                   122711
                            000116
                                                         CMPB
                                                                   #*N,(R1)
    244
         001002
                                                         BEQ.
                                                                   10$
                                                                                                OK, CONTINUE
    245
         001004
                                                         CALL
                                                                   ERR12.
    246
                   000167
         001010
                            BRARABE
                                                         IMP -
                                                                   CPXX
                                                                                                ;BAD · COMMAND ·
    247
248
         001014
                   052767
                             000000G · 000000G · 10$:
                                                         BIS
                                                                                                :SET-FLAG-FOR-NO-OLB ERASE
                                                                   #MEQLB,BASE
                                                         LOAD PPS MASK REGISTER
DO A MASTER RESET
    249
    250
251
252
                                                          INITIALIZE PPS
     253 001022
                   012746
                                                205:
                                                         MOV.
                            000052
                                                                   #Q$MR,-(SP)
                                                                                                :SELECT PPS MASK-REGISTER
     254 001026
                                                         CALL
                                                                   PPCR
     255 001032
                   012746
                             037774
                                                         MOV.
     256
         001036
                                                         CALL
                                                                   LBPSC
    258 001042
259 001046
                   012746
                                                         MOV.
                                                                                                :CLEAR - CSR1
                                                                                                :SET-RESET
:RESET-HQR
                   012746
                             000010
                                                         MOV-
                                                                   #Q$RSET,-(SP)
     260
         001052
                                                         CALL
                                                                   CSR1
     261 001056
                   012746
                             000010
                                                         MOV.
                                                                                                :CLEAR RESET
                                                         MOW.
                                                                   #<Q$MNC+Q$CNC+Q$RNC>,-(SP);SET-NO-CLKS
CSR1 ;MOVE-TO-CSR1
    262.001062
                   012746
                             176000
     263 001066
                                                         CALL
     265 001072
                                                         CALL
                                                                   PPINIT.
                                                                                                : INITIALIZE - PPS
    266
267
                                                         SET-MRP-AND-CP-START-ADDRESSES-TO-ZERO-
     268
     269 001076
                   005046
                                                         CLR
                                                                   -(SP)
                                                                                                 START-MRP AT-ZERO
    270 001100
271
                                                         CALL
                                                                   SEQMM
                                                                                                :SET-START ADDRESS
                                                         CLR:
     272.001104
                                                                                                :REINHIBIT BRANCH-CONTROL-REGISTER
    273 001106
274
                                                         CALL
                                                                   MRPCR
     275 001112-
                                                                                                START CP AT ZERO:
SEQUENCE ONLY UP TO START ADDRESS
                                                         CLR.
                                                                    (SP)
                   005046
    276 001114
277
                                                         CALL
                                                                   SEQUS-
    278 001120
279 001122
                                                         OLR:
                                                                   -(SP)
                   005046
                                                                                                :REINHIBIT BRANCH-CONTROL-REGISTER:
                                                                   CPCR
                                                         CALL
     280
                                                         SET-UP-FOR-OPERATIONAL INTERRUPTS.
**OPERATIONAL INTERRUPTS** ARE HIT BUFFER-INTERRUPTS.
**HRL-INTERRUPTS. AND DMA-INTERRUPTS.
    281
    282
    283
     284
                                                         CLEAR · HIT · BUFFER ·
    285
                                                                   #<Q$CHB+Q$CHRL>,QR$CR2-;CLEAR-OPERATIONAL INTERRURTS
    286 001126 012767
                            000600
                                      176422
```

```
CPBUG2 MACRO M1110 27-MAR-80 14:42 PAGE 7-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
            287 001134 012767
                                                                            001000' 176422
                                                                                                                                                                                   #Q$REBK,QR$CR2
                                                                                                                                                                                                                                                                :RE-ARM. INTERRUPTS
            288
            289
                        001142
                                                   012700
                                                                            000000G
                                                                                                                                                         MOV:
                                                                                                                                                                                                                                                                :LOAD NUMBER OF WORDS IN HIT BUFFER :CLEAR HIT LIST
                                                                                                                                                                                   #HLB,RØ
            290 001146
                                                  016701
                                                                                                                                                         MOV.
                                                                                                                                                                                   BCL,R1
            291 001152
                                                                                                                                                                                    (RØ)+
                                                  005020
                                                                                                                                                          CLR
             292.001154
                                                  005301
                                                                                                                                                          DEC
                                                                                                                                                                                   R1
            293 001156
                                                                                                                                                          RNF
            294
                                                                                                                                                          IF A BREAKPOINT IS IN EFFECT, BRANCH TO CODE THAT PREPARES TO FIELD A BREAKPOINT INTERRUPT, ELSE START FREE RUN WITHOUT
            295
            296
            297
298
                                                                                                                                                         BREAKPOINTS.
            299
                        001160
                                                   032767
                                                                            000000G · 000000G
                                                                                                                                                                                                                                                               ;ANY-BREAKPOINTS-SET
;YES, SET-UP-FOR-BREAKPOINT-
                                                                                                                                                         BIT
                                                                                                                                                                                    #BREAK,BASE.
             300
                        001166
                                                   001073
                                                                                                                                                         BNE
                                                                                                                                                                                   CBK2
            301
                        001170
                                                   012767
                                                                             120000: 176422
                                                                                                                                                          MOV
                                                                                                                                                                                  #<Q$SM+Q$ENOP>;QR$CR2.
#<Q$CSEL>,-(SP)
                                                                                                                                                                                                                                                                :ENABLE · OPERATIONAL · INTERRUPTS
             302-001176
                                                   012746
                                                                            000360
                                                                                                                                                                                                                                                               :CLR·SELECT·BITS·
:CLEAR·DRIVE·AND·PULSE
                                                  052716
             303
                        001202
                                                                            001001
                                                                                                                                                         BIS:
                                                                                                                                                                                   #<Q$LBD+Q$LBP>,(SP)
             304 001206
                                                  052716
                                                                                                                                                                                  #<Q$NCLK>.(SP)
-(SP)
                                                                            176000
                                                                                                                                                         BIS
                                                                                                                                                                                                                                                                ;CLEAR · NO-CLOCKS ·
            305
                        001212
                                                   005046
                                                                                                                                                         CLR.
                                                                                                                                                                                                                                                                :SET-NOTHING
             306 001214
                                                                                                                                                                                                                                                                :RE-WRITE CSR1
            307
            308
                                                                                                                                                         SEND-ATTENTION-CODE-AND-BCL-ADDRESS-
            399
            310 001220
                                                  012767
                                                                            000001
                                                                                                     176424
                                                                                                                                                         MOV-
                                                                                                                                                                                   #Q$BCL,QR$LBR: ;SET.ATTN.CODE:=:1
#<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2:;SET.ATTN.CODE.READY
                        001226
                                                  012767
                                                                            120100
                                                                                                    176422
                                                                                                                                                         MOV-
            312.001234
                                                  016701
                                                                                                                                                                                                                                                               ;READ CSR2
;IS.ATTN.BIT.CLEAR.
                                                                                                                                                         MOV-
                                                                                                                                                                                  OR$CR2.R1
            313 001240
                                                  032701
                                                                            000100
                                                                                                                                                                                   #Q$ATTN,R1
                        001244
                                                  001373
                                                                                                                                                                                                                                                                :NO, LOOP UNTIL CLEAR
            315
                                                                                                                                                                                   #BCL,QR$LBR : MOVE BCL ADDR TO LOD BUS REG. THE ACCEPTOR BY A SECOND BUS REG. TO SECOND B
           316 001246
317 001254
                                                  012767
                                                                            000000G-176424
                                                                                                                                                         MOV-
                                                  012767
                                                                            120040
176422
                                                                                                  176422
                                                                                                                                                         MOV-
                                                  016701
            318
                        001262
                                                                                                                                                                                                                                                               ;READ.CSR2
;IS.CC.TO.CP.CLEAR.
                                                                                                                               125:
                                                                                                                                                         MOV:
                                                                                                                                                                                  QR$CR2,R1
                        001266
            319
                                                  032701
                                                                            000040
                                                                                                                                                         BIT.
                                                                                                                                                                                   #Q$CCCP,R1
                                                                                                                                                                                                                                                                                                                                              320 001272-
                                                                                                                                                         BNE
                                                                                                                                                                                   12$
                                                                                                                                                                                                                                                               :NO, LOOP.UNTIL.CLEAR.
            324
                                                                                                                                                         PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROL TO USER (IN CASE MICROCODE HANGS UP OR RUNS FOREVER.)
            322
            323
                                                                                                                                                         CALL SUBROUTINE THAT WAITS FOR INTERRUPTS THEM DECODES
            325
            326
                        001274
                                                                                                                                                         GLEF$S: #EFN.4
                                                                                                                                                                                                                                                               :CLEAR . QIO EVENT . FLAG
            328
            329 001306
                                                                                                                                                                                                                                                                ; ISSUE QIO TO TERMINAL
                                                                                                                                                                                   HANG2 -
            330 001312
                                                                                                                                                                                                                                                                ;WAIT-FOR-EVENTS-
                                                                                                                                                         CALL
                                                                                                                                                                                   WINT
                        001316
                                                                                                                                                         CALL -
                                                                                                                                                                                  KILL
                                                                                                                                                                                                                                                               :KILL-QIO-
                                                                                                                                                         TURN OFF CLOCKS, SET LOAD MODE, PRINT MICROPGM ADDRESS
            333
            334
            335
                        001322
                                                  005046
                                                                                                                                                         CLR.
                                                                                                                                                                                   -(SP)
                                                                                                                                                                                                                                                                : CLEAR - NOTHING -
            336 001324
                                                  012746
                                                                                                                                                         MOV.
                                                                                                                                                                                   #<Q$NCLK>,-(SP)
                                                                                                                                                                                                                                                               ;SET.NO-CLOCKS
;WRITE.CSR 1
            337 001330
                                                                                                                                                                                  CSR1
            338 001334
                                                 005046
                                                                                                                                                         CLR.
                                                                                                                                                                                   -(SP)
                                                                                                                                                                                                                                                                :SET.CP.CONTROL.REG.TO.ZERO.
            339 001336
                                                                                                                                                                                                                                                          DO IT SET LOOD MODE WEEK ADDRESS OF STANK OF SUMMER OF STANK OF SUMER OF STANK OF SUMER OF SU
                                                                                                                                                                                  CPCR
                                                                                                                                                         CALL
           340 001342.
                                                 005067
                                                                           176422
                                                                                                                                                                                  QR$CR2
           341 001346
                                                                                                                                                         CALL:
                                                                                                                                                                                  CPMP
           342.001352
                                                 000167
                                                                           000000G
           343
```

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CPBUG2 - M
               0 M1110 27-MAR-80 14 A2: PAGE 7-2
Approved For Release 2005/07/1 LIA-RDP85-00514R000200020001-3
     344
     345
                                                            EXPECT. TO HIT A BREAKPOINT.
     346
347 001356
                                                  CBK2:
                                                                                                    ;CLEAR BREAKPOINT EYENT FLAG
     348 001356
                                                            CLEF$S: #EFN.3
     349
     350 001370
                                                            CLEE$S: #FEN.4
                                                                                                    :CLEAR . QIO EVENT . FLAG
     351
                                                             SET-BKPT-ALLOW-BIT-IN-CP-CONTROL REG-
     352
     353
                                                            SET-SEARCH-MODE-
SET-FREE-RUN CLOCK-
     354
     355
          001402
                              001000
                                                             MOV
                                                                       #CBKALLOW,-(SP)
                                                                                                     ;SET · CP · CONTROL · BIT
                                                                                                    ;WRITE CP CONTROL WORD .
SECR2 ;SET SEARCH MODE
                                                            CALL
MOV:
     357
          001406
                                                                       CPCR
                                                                       #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2.
                    012767
                               160000
                                        :176422
     358
          001412
                                                                                                    :CLR - SELECT - BITS -
     359
          001420
                    012746
                              000360
                                                             MOV:
                                                                       #<Q$CSEL>,-(SP)
                                                                                                    CLEAR DRIVE AND PULSE CLEAR NO-CLOCKS
     360
          001424
                    052716
                              001001
                                                             BIS
                                                                       #<Q$LBD+Q$LBP>.(SP)
                    852716
     361 001430
                              176000
                                                             BIS.
                                                                       #<Q$NCLK>.(SP)
                                                             CLR
                                                                       -(SP)
                                                                                                     :SET - NOTHING -
     362.001434
                    005046
     363 001436
                                                                       CSR1
                                                                                                     ; RE-WRITE CSR1
                                                                                                                                            FW
     364
365
                                                             SEND BCL ADDRESS TO CP.
     366
                                                                       #Q$BCL,QR$LBR: $SET.ATTN.CODE.=:1
#<Q$ATTN+Q$SM+Q$ENBK+Q$ENDP>,QR$CR2.;SET_ATTN.CODE.READY
          001442
                    012767
                              000001
                                        176424
                                                             MOV
                              160100
176422
     368
         001450
                    012767
                                        176422
                                                             MOV.
                                                                       QR$CR2,R1
     369
                    016701
                                                                                                    :READ - CSR2
          001456
                                                   115:
                                                             MOV
                    032701
                              000100
                                                                                                     : IS ATTN BIT CLEAR
     370
          001462
                                                                       #Q$ATTH,R1
     371 001466
                    001373
                                                                       115
                                                                                                     ;NO, LOOP-UNTIL-CLEAR-
     372
     373 001470
                    012767
                              000000G-176424
                                                             MOV
                                                                       #BCL,QR$LBR
                                                                                                     : MOVE - BCL - ADDR - TO - LOD - BUS - REG
     374 00147€
                    012767
                              160040
                                        176422
                                                             MOV:
                                                                       #<Q$CCCP+Q$SM+Q$ENBK+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:SLAVE:DATA:READY:
                                                                                                    :READ·CSR2
:IS·CC·TO·CP·CLEAR
     375
          001504
                    016701
                               176422
                                                   12$:
                                                             MOV.
                                                                       QR$CR2,R1
     376 001510
                    032701
                              000040
                                                             BIT.
                                                                       #Q$CCCP,R1
                                                                                                     :NO. LOOP UNTIL CLEAR
     377
          001514
                    001373
                                                             BHE
                                                                       12$
     378
                                                             PROVIDE FOR INTERRUPT FROM TERMINAL TO RETURN CONTROLS TO USER (IN CASE MICROCODE HANGS UP OR RUNS FOREVER, FALL SUBROUTINE THAT WAITS FOR INTERRUPTS THEM DECODES
     379
     380
     381
     382
                                                                                                     :KILL . QIO.
     384 001516
                                                             GALL:
                                                                       HANG2
                                                                                                     :WAIT FOR INTERRUPTS
                                                             CALL -
                                                                       WINT
     385 001522
      386
                                                             RESET-NO-CLOCKS-IN-CSR 1
      387
                                                             SET-LOAD-MODE-
PRINT-MICROPGM-ADDRESS
      388
      389
      390
                     005046
                                                             CLR
                                                                       -(SP)
                                                                                                     : CLEAR · NOTHING ·
                                                                                                     ;SET NO-CLOCKS:
RE-WRITE CSRI
      392-001530
                     012746
                               176000
                                                             MOV.
                                                                       #<Q$NCLK>,-(SP)
                                                                       CSR1
                                                             CALL
      393
          001534
                                                                                                     SEND 0 TO CP CONTROL REG
          001540
                                                             CLR
                                                                       -(SP)
                                                                                                                               2304
                                                                       CPCR
                                                                                                     :DO:IT:
      395
          001542
                                                             CALL
     396
                                                                                                     #SET-LOAD-MODE
#RE-ARM-INTERRUPTS
#PRINT-MICROPGM-ADDRESS
                               176422
                                                             CLR
                                                                       QR$CR2
                    005067
                                                                       #Q$REBK,QR$CR2
     398
          001552
                    012767
                              001000
                                        176422
                                                             MOV.
                                                                       CPMP
                                                             CALL
     399 001560
                                         CALL KILL SKILL AST Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     400 001564
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401 001570 000167 000000G····

JMP···· CPXX

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CPBUG2 -
               0-M1110 27-MAR+80 14:42- PAGE-8
                                         Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     493
     404
     405
                                                            WAIT-FOR-INTERRUPTS-
                                                            NB. DO NOT USE 'WTSE$S' OR 'WTLO$S'. THEY CAUSE SYSTEM PROBLEMS
     406
                                                            IN CONNECTION WITH THE WAY INTERRUPTS ARE HANDLED (SEE THE
     497
     408
                                                             "BPTISR: SUBROUTINE IN QMAIN).
     409
     410
     411 001574
                                                  WINT:
                                                            RDAF$S: #EFBUF:
                                                  100$:
                                                                                                    :READ · EVENT · FLAGS
     413
     414 001606
                   932767
                              000014 000000G
                                                                      #<BIT3+BIT2>,EFBUF
                                                                                                    : ANY INTERRUPTS
     415 001614
                   901767
                                                                      100$
                                                                                                     :NO, READ-AGAIN-
     416
                                                            INTERRUPT DETECTED, DECODE IT.

NB. EVENT FLAGS NUMBERS BEGIN WITH 1. BIT NUMBERS IN THE
     417
     418
     419
                                                            EVENT FLAG BUFFER BEGIN WITH 0.

IF THE INTERRUPT IS FROM THE TERMINAL, IMMEDIATELY EXIT THIS SUBROUTINE.
     420
     421
     422
     423 001616
                   032767
001402
                              000010 000000G
                                                            BIT.
                                                                      #BIT3.EFBUF
                                                                                                    ;EF.#4 = · INTERRUPT · FROM · TERMINAL ·
     424 001624
                                                            BEO.
                                                                      10$
                                                                                                    :NO
     425 001626
                    000167
                                                            MMI.
                                                                      WINTX2
                                                                                                    :EXIT-IF-TRUE
     426
     427
                                                            READ CSR2. CSR2 INCLUDES THE INTERRUPT FLAGS.
     428
         001632
     429
                   016767
                              176422
                                        000000G 10$:
                                                            MOV.
                                                                      QR$CR2,APLACE.
                                                                                                     ;READ · CSR · #2 ·
     430 001640
                    042767
                                                            BIC
                                                                      #177770,APLACE
                                                                                                    :MASK - OFF - INTERRUPT - BITS -
     431
     432
                                                            GHECK FOR CP BREAKPOINT INTERRUPT.
BECAUSE BREAKPOINT INTERRUPTS ARE OF THE HIGHEST PRIORITY.
CHECK TO SEE WHETHER A HIT LIST OR HRL INTERRUPT IS PENDING.
THIS WILL ONLY HAPPEN WHEN IN THE MICROCODE A BREAKPOINT
     433
     434
     435
     436
                                                            HALT-IMMEDIATELY-FOLLOWS-AN-HL-OR-HRL-INTERRUPT-(*CPBUG2: WILL-SEE-THEM-IN-REVERSE-ORDER).
     438
     439
     440
                                                            DMA INTERRUPTS WILL GO UNREPORTED UNDER THESE CIRCUMSTANCES.
     441
     442
     443
                                                            TELL WHETHER A HIT BUFFER INTERRUPT IS PENDING BY LOOKING
     444
                                                            AT THE BCL FOR A CLEARED ENTRY.
     445
     446
          001646
                    122767
                                                                                                    ;CP·BREAKPOINT·INTERRUPT·
                              000006 000000G
                                                            CMPB
                                                                      #Q$ICP,APLACE
          001654
                    001060
                                                            BNE -
                                                                                                    ;NO, CHECK OTHERS:
;HIT-BUFFER-BCL-ENTRY-CLEARED
                                                                      OTHERS:
     448
          001656
                    005767
                              000002G
                                                                      BCL+2.
     449
          001662
                    001025
                                                                      2$
                                                                                                    :NO. TEST-HRI.
     450
         001664
                    912767
                              101000
                                        176422
                                                            MGV.
                                                                      #<Q$SM+Q$REBK>,QR$CR2
                                                                                                    : RE-ARM. INTERRUPTS.
     451
          001672
                    012767
                              120000
                                        176422
                                                            MOM-
                                                                      #<Q$SM+Q$ENOP>,QR$CR2
                                                                                                     ENABLE OPERATIONAL INTERRUPTS
     452.001700
                    012767
                                        176422
                                                                      #<QssNHqschB+QschRL>.QRscR2:;CLEAR GPERATEONAL INTERRUPTS
#HLB.BCL+2: RESTORE BEL-ENTRY F
#HBMSG.R0 :POINT TO HIT LIST MESSAGE
                              100600
                                                            MOV
                                                            MÖV.
     453 001706
                    012767
                              000000G · 000002G
     454 001714
                    012700
                              0000171
                                                            MOV
     455
         001720
                   012705
                              000000G
                                                            MOV
                                                                      #PRINT, R5
                                                                                                     : POINT - TO - PRINT - LINE
     456
         001724
                    112025
                                                  1$:
                                                            MOVB
                                                                      (R0)+,(R5)+
     457
         001726
                    001376
                                                            BNE
                                                                      1$
     458 001730
                                                            CALL
                                                                      CONSOL -
                                                                                                    : PRINT - MESSAGE
                   000541
     459 001734
                                         Approved For Release 2005/07/12 : CIA-RDP85-00514R000200200020001-3
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CPBUG2 MACRO M1110 27-MAR-80 14:42 PAGE 8-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
              460
                                                                                                                                                                  \texttt{GHECK} \cdot \texttt{WHETHER} \cdot \texttt{AN} \cdot \texttt{HRL} \cdot \texttt{ENTRY} \cdot \texttt{IS} \cdot \texttt{PENDING} \cdot \texttt{BY} \cdot \texttt{LOOKING} \\ \texttt{FOR} \cdot \texttt{A} \cdot \texttt{CLEARED} \cdot \texttt{BCL} \cdot \texttt{ENTRY};
              461
              462
              463
             464 001736
465 001742
                                                       805767
                                                                                 000012G
                                                                                                                                                                  TST
                                                                                                                                                                                            BCL+10.
WINTX
                                                                                                                                      2$:
                                                                                                                                                                                                                                                                             ;HRL · BCL · ENTRY · CLEARED ·
                                                       001136
                                                                                                                                                                  BHE
                                                                                                                                                                                                                                                                            :NO. EXIT:
:RE-ARM:INTERRUPTS:
                                                                                                                                                                                            #<Q$SM+Q$REBK>,QR$CR2
#<Q$SM+Q$ENOP>,QR$CR2
                          001744
                                                     012767
012767
              466
                                                                                 101000
                                                                                                            176422
                                                                                                                                                                  MOV
              467
                           001752
                                                                                 120000
                                                                                                            176422
                                                                                                                                                                  MOV
                                                                                                                                                                                                                                                                             :ENABLE · OPERATIONAL · INTERRÚPTS
              468
                           001760
                                                                                  100600
                                                                                                            176422
                                                                                                                                                                                            #\Cussh\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\taskle\t
                                                                                                                                                                  MOV
              469
                          001766
001774
                                                      012767
                                                                                 000000G-000012G
                                                                                                                                                                  MOV
              470
                                                      012700
                                                                                 0000421
                                                                                                                                                                  MOV
                           002000
                                                      012705
                                                                                 000000G
                                                                                                                                                                  MOM
             472 002004
473 002006
                                                       112025
                                                                                                                                      3$:
                                                                                                                                                                  MOVB
                                                                                                                                                                                            (R0)+,(R5)+
                                                      001376
                                                                                                                                                                  BNE -
                                                                                                                                                                                            3$
              474
                          002010
                                                                                                                                                                  CALL
                                                                                                                                                                                            CONSOL
                                                                                                                                                                                                                                                                            :PRINT-MESSAGE:
:LEAVE-INTERRUPT-ROUTINE
              475
                          002014
                                                      000511
                                                                                                                                                                                            WINTX.
              476
              477
                                                                                                                                                                                                                                                                            The same of the sa
              478
                                                                                                                                                                  CHECK FOR MRP INTERRUPT
              479
              480
                           002016
                                                       122767
                                                                                 000007
                                                                                                          000000G OTHERS: CMPB
                                                                                                                                                                                            #Q$IMRP,APLACE
                                                                                                                                                                                                                                                                            :MRP.BREAKPOINT.?.
              481
                          002024
                                                       001003
                                                                                                                                                                                                                                                                            :NO. TRY NEXT:
:R0 -> MESSAGE:
:PRINT MESSAGE
                                                                                                                                                                 BNE.
                                                                                                                                                                                            1 生
                                                                                                                                                                                            #MRPMSG,RØ
              482 - 002026
                                                      012700
                                                                                 000000'
                                                                                                                                                                 MOV
              483
                           002032
                                                     000443
                                                                                                                                                                                           PMSG
              484
              485
                                                                                                                                                                 CHECK FOR HIT BUFFER INTERRUPT
              486
              487
                           002034
                                                       122767
                                                                                 000003
                                                                                                           000000G·1$:
                                                                                                                                                                                                                                                                            :HIT-LIST-INTERRUPT-
                                                                                                                                                                 CMPB
                                                                                                                                                                                            #Q$IHB,APLACE
              488
                          002042
                                                       001011
                                                                                                                                                                 BNE -
                                                                                                                                                                                           2$
                                                                                                                                                                                                                                                                             :NO. TRY NEXT
                                                                                                                                                                                            #<Q$SM+Q$CHB>,QR$CR2.
              489
                          002044
                                                      012767
                                                                                 100400
                                                                                                            176422
                                                                                                                                                                 MOV.
                                                                                                                                                                                                                                                                             :CLEAR.HL.INTERRUPT.
                                                      012767
              49B
                                                                                000000G 000002G
000017
                          002052
                                                                                                                                                                 MOV-
                                                                                                                                                                                            #HLB,BCL+2
                                                                                                                                                                                                                                                                            PUT-BUFFER ADDRESS BACK-IN-BCL
POINT-TO-HIT-LIST-MESSAGE-
PRINT-MESSAGE-
                                                      012700
              491
                          002060
                                                                                                                                                                 MOV-
                                                                                                                                                                                            #HBMSG,RØ
                                                     000426
              492
                           002064
                                                                                                                                                                 BR
                                                                                                                                                                                           PMSG
              493
              494
                                                                                                                                                                 CHECK · FOR · HRL · INTERRUPT ·
              495
              496
                           002066
                                                       122767
                                                                                                                                                                 CMPB
                                                                                 000002
                                                                                                           000000G · 2$:
                                                                                                                                                                                            #Q$IHRL,APLACE
                                                                                                                                                                                                                                                                            :HRL · INTERRUPT
              497
                           002074
                                                       001011
                                                                                                                                                                 BNE -
                                                                                                                                                                                           3$
                                                                                                                                                                                                                                                                             ; NO. TRY NEXT
                                                                                                                                                                                            #<Q$SM+Q$CHRL>,QR$CR2
              498
                          002076
                                                     012767
                                                                                 100200
                                                                                                         :176422
                                                                                                                                                                 MOV
                                                                                                                                                                                                                                                                            #CLEAR-HRL INTERRUPT
#PUT-BUFFER-ADDRESS BACK-IN BCL-
#POINT-TO-HRL-MESSAGE-
              499
                          002104
                                                     012767
                                                                                000000G-000012G
000042'
                                                                                                                                                                 MOV-
                                                                                                                                                                                            #HRL,BCL+10.
                           002112
                                                     012700
                                                                                                                                                                 MOV-
                                                                                                                                                                                            #HRLMSG, RØ
              501 002116
                                                     000411
                                                                                                                                                                                           PMSG
              502
              503
                                                                                                                                                                 GHECK-FOR-DMA-INTERRUPT-
NB. DMA-USES HIT-BUFFER-INTERRUPT-REQUEST-FROM-CP-
(SEE-CP-MICROCODE).
              504
              505
              506
              507
                          002120
                                                      122767
                                                                                 000001
                                                                                                          000000G.3$:
                                                                                                                                                                 CMPB
                                                                                                                                                                                            #Q$DMA,APLACE
                                                                                                                                                                                                                                                                            :DMA: ?
                          002126
                                                     001030
                                                                                                                                                                 BNF -
                                                                                                                                                                                           UNID
             509 002130
510 002136
                                                                                                                                                                                            #<Q$SM+Q$CHB>,QR$CR2
                                                     012767
                                                                                 100400
                                                                                                                                                                 MOV
                                                                                                                                                                                                                                                                            :CLEAR-DMA INTERRUPT (USING-HIT-BUF-FLAG) :POINT-TO-DMA-MESSAGE-
                                                                                                                                                                                            #DMAMSG,RØ
                                                     012700
                                                                                 000060
                                                                                                                                                                 MOV-
             511
             512
513
                                                                                                                                                                 PRINT-MESSAGE: CLEAR-INTERRUPT-FLAG: WAIT-FOR-NEXT-INTERRUPT.
                                                                                                                                                                                                                                                                            PUNT TO PRINT LINE
             514 002142
                                                                                                                                     PMSG∶
                                                    012705
                                                                               000000G
                                                                                                                                                                 MOV:
                                                                                                                                                                                            #PRINT, R5
             515
                        002146
002150
                                                     112025
                                                                                                                                                                 MOVB
                                                                                                                                                                                            (R0)+.(R5)+
                                                                                                                                      3$:
             516
                                                    001376
                                                                                                                                                                 BNE
```

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517 002152				CALL	CONSOL.	;WRITE·MESSAGE·TO·TERMINAL·
518 519 002156				CLEF\$S∙	#EFN.3	;CLEAR HOR INTERRUPT.EVENT/FEAG
520 521 002170 522-002176 523 002204	012767 012767 000167	101000 176422 160000 176422 177364	,	MOV: MOV: JMP:	# <q\$sm+q\$rebk>,QR\$CR2 #<q\$sm+q\$enbk+q\$enop>,QF WINT</q\$sm+q\$enbk+q\$enop></q\$sm+q\$rebk>	:RE-ARM INTERRUPTS(R\$CR2 :ENABLE INTERRUPTS :WAIT FOR NEXT INTERRUPT
524 525			:	UHIDEHT	IFIED INTERRUPT	
526 527 002210 528 002214 529 002220	012700 012705 112025	000000G 000000G	ÚNID: 5\$:	MOV: MOV: MOVB	#UNMSG.R0 #PRINT.R5 (R0)+,(R5)+	;POINT-TO-MESSAGE- ;POINT-TO-PRINT-LINE
530 002222 531 002224 532 002230 533 002234	001376 016701	000000G·		BNE : MOV : CALL : CALL :	5\$ APLACE,R1 UNPK CONSOL	:LOAD CSR2 INTO R1 :CONVERT TO ASCII HEX :WRITE MESSAGE TO TERMINAL
534 535 536			;	EXIT.		1
537 002240 538 002240 539			WINTX:	CLEF\$S.	#EFN.3	;CLEAR-HOR INTERRUPT EVENT-FLAG-
540 002252.			ώΙΝΤΧ2:	RETURN -		

```
1. 1.
CPBUG2 MACRO M1110 27-MAR-80 14:42 PAGE_9
                                                                    Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
        542
543
544
545
                                                                                                    PRINT-CP-MICROPROGRAM-ADDRESS-
       546
547 002254
548 002254
549 002260
                                                                                    ĈPMP:
                                                                                                                    #<CSADRD>,-(SP)
CPCR
CPLB
(SP)+,R1
#176000,R1
                                 012746
                                                  000004
                                                                                                    MOV.
                                                                                                                                                                       READ MPA SELECT BIT
WRITE CP CONTROL REGISTER
REQUEST CP TO LOD BUS
                                                                                                     CALL
       550 002264
551 002270
552 002272
553 002276
                                                                                                    CALL
MOV
                                                                                                                                                                       #REMUEST CP- TO LOD BI

#UNLOAD MPA:

#CLEAR UPPER 6 BITS

#POINT TO PRINT LINE

#CONVERT MPA :

WRITE TO CONSOLE

#CLEAR CP CR
                                 312601
                                                                                                    MUY:
BIC:
MOY:
CALL:
CALL:
CLR:
CALL:
RETURN:
                                 042701
012705
                                                  176000
                                                  000000G
                                                                                                                     #PRINT, R5
UNPK
       553 002276
554 002302
555 002306
556 002312
557 002314
558 002320
                                                                                                                     CONSOL .
                                 005046
                                                                                                                     -(SP)
CPCR
```

```
CPBUG2 - Ma
              O M1110 27-MAR-80 14:42 PAGE 10
                                       Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
    560
561
562
                                                         INITIALIZE PPS
    563
564
565
                                                         SET HP QUIESCENT
    566
    567
         002322
                                               PPINIT:
    568
         002322
                   012746
                            000053
                                                         MOV-
                                                                   #Q$QLA,-(SP)
                                                                                               :ADDRESS-SELECT-FOR-QLB-PAGES
    569
         002326
                                                                  PPCR
                                                         CALL
    570 002332
571 002336
572
                   012746
                            002000
                                                         MOV.
                                                                   #2000,-(SP)
                                                                                               ;SEND-ADDRESS-X14001 (ILLEGAL)
    573
574
                                                         RESET - MRP - AND - CP -
    575
576
         002342
002344
                   885846
                                                         GLR
                                                                   -(SP)
                                                                                               :CLEAR · NOTHING · IN · CSR1
                   012746
                            BBBBBB
                                                         MOV.
CALL
                                                                   #Q$MSET,-(SP)
                                                                                               :SET RESET
         002350
                                                                  CSR1
    578
579
         002354
002360
                            000004
                                                         MOV.
                                                                  #Q$MSET, -(SP)
                                                                                               ;CLEAR·RESET.;SET·NOTHING.
                   005046
                                                         CLR
     580 002362
                                                         CALL
                                                                  CSR1
    582.002366
                   005046
                                                         GLR
                                                                   -(SP)
                                                                                               :CLEAR · NOTHING · IN · CSR 1
    583 002370
                   012746
                            000002
                                                         MOV.
                                                                   #Q$CSET,-(SP)
                                                                                               :SET-RESET
     584 002374
                                                         CALL:
                                                                  CSR 1
     585 002400
                   012746
                                                                  #Q$CSET,-(SP)
                            000002:
                                                                                               :CLEAR RESET
    586
         002404
                   005046
                                                         CLR.
                                                                   -(SP)
                                                                                               :SET - NOTHING
     587
         002406
                                                                  CSR4
     588
    589
590
                                                         SET-1QLB-ERASE1
    591 002412·592·002420
                   032767
                            000000G · 000000G
                                                                   #NEQLB, BASE
                                                                                               :NO.ERASE.FOR.QLB.?.
                   001406
                                                         BEQ.
                                                                                               ;ERASE · QLB
     593
         002422
                   042767
                                                                  #NEQLB, BASE
                            000000G · 000000G
                                                         BIC
                                                                                               :CLEAR NO ERASE FLAG
     594
         002430
                                                         MOV.
                                                                  #300,-(SP)
                                                                                               :SET.CODE -- X'CO'
    595 002434
596
                   000402
         002436
                   012746
                            000100
                                                1$:
                                                         MOV.
                                                                   #100.-(SP)
                                                                                               ;SEND-X:40' TO-PPCR
    598 002442
599 002446
                                                         CALL
                                                                  PPCR
                                                         RETURN.
    600
     601
                   000001
                                                         .END
```

```
CPBUG2 MACRO M1110 27-MAR-80 14:42 PAGE 10-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                   BYTE9 = 000011
                                 BYTE38= 000046
                                                                                                    LBPP: =:****** GX
                                                                                                                                             = 000045
ALUCKE=-040000
                                                                  BYTE90 = 000132
BYTE91 = 000133
                                                                                                    LBPSC:=: ******** GX-
LOC.EN=:000100
                                                                                                                                             = 000044
= 000046
ALU0E - = 004000
                                 BYTE39= 000047
                                                                                                                                     Q$F0
APLACE= · *******
                                 BYTE4 = 000004
                                                                                                                                     Q$FP
                                                                                                   LOC.WA= 040000
LOC.WB= 100000
                                                                   BYTE92= 000134
                                                                                                                                     O⊈HBF
                                                                                                                                             · = · 000002
                                 BYTE40=:000050
A01
       = · 010000
                                 BYTE41 = . 000051
                                                                   BYTE93= 000135
                                                                                                                                     Q$ICP = 000006
BASE: = ******* GX
                                 BYTE42= 000052
                                                                   BYTE94= 000136
                                                                                                    MAREN1 = . 000001
                                                                                                                                     Q$IHB -- 000003
BCL -
        = · ****** GX
                                                                                                    MAREN2= 004000
MARLOD= 010000
MAROUT= 000002
BINUD = ****** GX
                                 BYTE43= 000053
BYTE44= 000054
                                                                   BYTE95 = - 000137
                                                                                                                                     Q$IHRL= 000002
                                                                   BYTE96=-00013/
BYTE97=-000141
                                                                                                                                     Q$IMRP= 000007
BITVAL = 000000
BIT0 = 000001
                                 BYTE45= 000055
                                                                                                                                     Q$LBD - - 001000
                                                                                              MAR.LO= 002000
MAR.OU= 000040
MAR.OU= 0010040
MBKALL= 001000
                                 BYTE46=-000056
BYTE47=-000057
                                                                   BYTE98= 000142
BYTE99= 000143
        = .000002
                                                                                                                                     Q$LBDP=.001001
Q$LBP.=.000001
BIT1
        = · 002000
= · 004000
BIT10
                                                                   BYTVAL = 000144
                                                                                                                                     Q$LDCD= 000003
BIT11
BIT12
                                 BYTE48 = . 000060
        = 010000
                                 BYTE49= 0000061
                                                                                                                                     Q$LDMD=.000004
                                                                   CBKALL = . 001000
                                                                                              MMADRD = 000100
MMLEFT = 000002
002 · MMOE · = 000004
                                                                                                                                     Q$LDPP=.002000
Q$LHP.=.010000
                                 BYTE5 = 000005
BIT13
        ⇒·020000
                                 BYTE50 = 000062
                                                                   CBKCLK = . 000400
BIT14
        = 040000
        = 100000
                                 BYTE51 = 000063
                                                                                                                                     Q$MNC -- 140000
BIT15
                                                                   CBK2.
                                                                              001356R
                                                                                              002 MMWRTE - 000004
002 MMWRTE - 000010
MNOBRE - 100000
MREN1 - 000001
MREN2 - 020000
                                 BYTE52=-000064
BYTE53=-000065
BYTE54=-000066
                                                                             000252R
                                                                                                                                     0$MR = . 000052
                                                                   CGO:
                                                                                                                                     Q$MRP - 0000040
                                                                   CHOBRE = - 100000
BIT3
        = -000010
                                                                                                                               0$/787 = 000040
0$/787 = 040040
0$/787 = 040000
0$/788 T = 000004
002 0$/788 = 100000
                                                                   CONSOL = · ***** GX
BIT4
        = .000020
         = · 000040
                                 BYTE55= 000067
                                                                   CPCCEN= 010000
BIT5
                                 BYTE56=-000070
BYTE57=-000071
                                                                   CPCR.
                                                                          -- ******
                                                                                                    MRPCR - = · ****** GX
BIT7
        = .000200
                                                                   CPLB = жижжиж GX
                                                                                                    MRPMSG: 000000R
                                                                                                                                     Q$NCLK= 176000
                                                                   CPMP
                                                                             002254R
                                                                                              002 MSYN = 000040
BITS

    - 999499

                                 BYTE58= . 000072
                                 BYTE59= 000073
                                                                                                            = 000144
                                                                   CPREAD = . 040000
                                                                                                                                             = 000100
        = .001000
BIT9
                                                                                                                                     O$PPSW= 000320
O$PP2 = 000300
O$QHLT= 000013
                                                                                                    NEQLB = ****** GX
                                 BYTE6 = 000006
                                                                   CPWRTE = - 020000
BREAK . = . ***** GX
BYTE0 = 000000
                                 BYTE60= 000074
                                                                   CPXX- =-******* GX
                                                                                                    OTHERS 002016R
                                                                   CSADRD= 000004
BYTE: - 000001
                                 BYTE61= 0000075
                                                                                                    PACK - - ******** GX
                                                                   CSEQCI=-100000
                                                                                                    PLB.
BYTE10=-000012
                                 BYTE62= 0000076
                                                                                                            = .000010
                                                                                                                                     Q$QL = .000043
                                 BYTE63=-000077
BYTE64=-000100
                                                                                                                                     Q$QLA · = · 000053
                                                                   CSHIGH= ****** GX
                                                                                                            = 0000020
BYTE! 1= : 000013
                                                                                                    PLC:
BYTE12= 000014
                                                                   Q$QLB.=.000054
                                                                                                    PLD
                                                                                                            = .000030
BYTE13= 000015
                                 BYTE65=-000101
                                                                                                    PLRWR - = - 000200
                                                                                                                                     Q$QLR·=·000001
                                                                   CSWRTE = 000100
                                                                                                                                     Q$QW = 000042
BYTE14= 000016
                                 BYTE66=-000102
                                                                                                    PLR.EN= 000200
                                                                                                                                002 Q$RDCD= 000005
BYTE15=-000017
BYTE16=-000020
BYTE17=-000021
                                 BYTE67= 000103
BYTE68= 000104
                                                                   DBR.RD= 000001
DB$CPP= 001457
                                                                                                    PMSG -
                                                                                                              002142R
                                                                                                            = · ****** GX
                                                                                                                                     Q$RDMD= 000006
                                                                                                    PPCR
                                 BYTE69= 000105
                                                                   DB$SPT= 000026
                                                                                                    PPINIT 002322R
                                                                                                                                002 · Q$REBK = · 001000
                                 BYTE7 = 000007
BYTE70= 000106
BYTE71= 000107
                                                                                                    PRINT -- ****** GX QR$CR1= 176420
                                                                                                                                     Q$RNC - - 006000
Q$RSC - - 004000
BYTE18= 0000022
                                                                   DB$TPC=-000023
                                                                   DISPGS = 100000
DMAAWR = 000005
BYTE19= 000023
BYTE2 = 000002
                                                                                                                                     Q$RSET= 000010
Q$RSET= 100000
Q$SM = 100000
Q$SP = 000120
                                                                                              QR$CR2= 176422
002 QR$LBR= 176424
BYTE20= 000024
                                  BYTE72= 000110
                                                                             000060R
                                                                   DMAMSG+
                                                                                                    Q$ATTN=.000100
Q$BCL.=.000001
                                                                                                                                     Q$SP = 000120
Q$SP2 = 000340
BYTE21 = - 000025
                                 BYTE73= 000111
                                                                   DMARRD= · 000003
                                 BYTE74= 000112
BYTE22= 0000026
                                                                   DMARLIR = - AAAAA4
                                                                                                    Q$CCCP=-000040
                                                                                                                                     RGQ.EN= 000200
BYTE23= 000027
                                  BYTE75= 000113
                                                                   EFBUF - - ****** GX-
                                                                                                    Q$CHB·=·000400
Q$CHRL=·000200
Q$CLR·=·000040
BYTE24= 0000030
                                  BYTE76= 000114
                                                                   EFN:3
                                                                              жжжжжж БХ-
                                                                                                                                      RG0.VA= 020000
                                 BYTE77= 000115
BYTE78= 000116
                                                                           = · энникин GX
BYTE25= 000031
                                                                   EFN:4
                                                                                                                                      SEDES: = : жжжжжж
                                                                                                                                      SEQMM =
                                                                   EMBR -
                                                                           = 010000
                                                                                                                                                жжжжж
BYTE26 = . 000032
                                                                                                    Q$CNC -- 030000
Q$CP -- 000060
BYTE27 = 0000033
                                  BYTE79= 000117
                                                                   ERR10
                                                                           = · ****** GX
                                                                                                                                      SEQ.CI=
                                                                                                                                                000010
                                                                   ERR12· = · ********* GX
BYTE28= 000034
                                  BYTE8 = 000010
                                                                                                                                      S$CLR -=
                                                                                                                                                000000
BYTE29 - 000035
BYTE3 - 000003
                                  BYTE80= 000120
                                                                           ≖ жжжжжжж GX
                                                                                                    Q$CPCC= 000010
                                                                                                                                                000001
                                                                   ERR5
                                                                                                                                      S$LA
                                                                                              Q$CP2 · = · 000260
002 · Q$CSC · = · 010000
002 · Q$CSEL = · 000360
                                  BYTE81= 000121
                                                                           =·********** GX
                                                                                                                                      S$QB
                                                                                                                                                 000005
BYTE30= 000036
BYTE31= 000037
                                 BYTE82= 000122
BYTE83= 000123
                                                                   FR2:
GOD:
                                                                              000770RG:
000136RG:
                                                                                                                                      S#QR
                                                                                                                                                000006
                                                                                                                                      S$0X
                                                                                                                                                999994
BYTE32= 000040
                                                                   HANG2 - - ******* GX
                                                                                                    Q$CSET= 000002
                                 BYTE84= 000124
                                                                                                                                                000007
BYTE33= 000041
                                                                   HBMSG· 000017R
                                  BYTE85=-000125
                                                                                               002 · Q$CSP · = · 020000
                                                                           = ***** GX
                                                                                              0$DMQ 099991
0$ENBK = 040000
002.0$ENOP= 020000
                                                                                                                                     9#$255.₹₽000014;
TD$CTR= 176370,
TD$CTW= 176360
                                 BYTE86= 000126
BYTE34= 000042
                                                                   HIB.
                                                                           = · ***** GX
BYTE35 = . 000043
                                 BYTE87 = . 000127
                                                                   HRI
BYTE36= 000044
                                 BYTE88= 000130
                                                                   HRLMSG. 000042R
                                 Approved For Release 2005/07/12
                                                                                                                                      TD$INL≌:004000
                                                                                           IA-RDP85-00514R000200020001-3
```

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CPBUG2 · M
                 0 · M1110
SYMBOL TA
                                    T$0BE · = · 004000
                                                                       WORD16= 0000040
TD$MEM= . 000270
                                                                                                           WORD45=-000132
                                                                                                                                                WORD74=:000224
TD$ÖAR≕ 176344
                                    T$OBF·=-010000
                                                                        WORD17= 000042
                                                                                                           WORD46 = 000134
                                                                                                                                               WORD75=-000226
WORD76=-000230
WORD77=-000232
TD$OTR= 176346
TD$QRD= 000274
TD$SW-= 176376
                                    T$0BRA=-000034
                                                                        WORD18= 000044
                                                                                                           WORD47 = . 000136
                                    T$08WA=-000032
T$0UTA=-100000
                                                                       WORD19=-000046
WORD2-=-000004
                                                                                                            WORD48=-000140
                                                                                                                                                WORD78= 000234
WORD79= 000236
WORD8 = 000020
                                                                                                           WORD49= 000142
WORD5 = 000012
TD$TAR= 176372
                                    T$RBD0=:000200
                                                                        WORD20=-000050
                                    T$RNB · = · 000040
T$RSET= · 040000
TD$TAW≕-176362
                                                                        WORD21 = 000052
                                                                                                           WORD50= 000144
TD$TDR= 176374
                                                                       WORD22=-000054
WORD23=-000056
WORD24=-000060
                                                                                                           WORD51= 000146
                                                                                                                                                WORD80= 000240
TD$TDW= · 176364
                                    T$SC = 000022
                                                                                                           WORD52= 000150
WORD53= 000152
                                                                                                                                               WORD81= 000242
WORD82= 000244
WORD83= 000246
T$AD· = 000020
T$BA· = 000002
                                    T$SCLK= 020000
                                    T$SEG1=-000000
                                                                        WORD25= 000062
                                                                                                           WORD54= 000154
T$BD - = 0000010
                                    T$SEG2 = . 000001
                                                                       WORD26=-000064
WORD27=-000066
                                                                                                           WORD55= 000156
                                                                                                                                                WORD84= 000250
T$BSO·=·100000
T$BT·=·000020
T$BTAR=·000030
                                    T$SEG3=-000002
                                                                                                           WORD56=-000160
WORD57=-000162
                                                                                                                                               WORD85=-000252
                                    T$SO: =:000001
T$UBUS=:100000
T$1CLK=:000400
                                                                        WORD28= 000070
                                                                                                                                               WORD86= 000254
WORD87= 000256
                                                                        WORD29=-000072
                                                                                                           WORD58= 000164
T$BTD - = -002000
                                                                                                                                               WORDSF = 000256
WORDSS = 000260
WORDSS = 000262
WORDS = 000022
WORDSS = 000264
                                                                       WORD3 = 000006
                                                                                                           WORD59= 000166
WORD6 = 000014
WORD60= 000170
T$CD· = 002000
T$CLK·= 002000
                                    T$8BEN= 000020
                                                                        WORD30= 000074
                                    UBD.IN= 000020
                                                                        WORD31 = 000076
T$DISK=-000200
T$DRD-=-000004
                                    HNID.
                                               002210R
                                                                  002-WORD32= 000100
                                                                                                           WORD61=-000172
                                    UNMSG -
                                                                 002·WORD33=.000102
WORD34=.000104
                                               000076R
                                                                                                            WORD62=-000174
                                                                                                                                                WORD91= 000266
T$EMEM=:010000
                                   WORD63= 000176
WORD64= 000200
                                                                                                                                               WORD92= 000270
T$F$AA=.000000
T$F$AB=.000004
                                                                  002 · WORD35 = · 000106
                                                                                                                                               WORD93= 000272
WORD94= 000274
                                                                  002-WORD36=-000110
002-WORD37=-000112-
WORD38=-000114
                                    MINTX.
                                               002240R
002252R
                                                                                                           WORD65= 000202
T$FSAC= 000014
                                    WINTX2
                                                                                                           WORD66 = 000204
WORD67 = 000206
                                                                                                                                               WORD95= 000276
T$FSB2=-000010
T$IB- =-000026
                                    WORD0 - 000000
                                                                                                                                               WORD96= 000300
WORD97= 000302
WORD98= 000304
                                    WORD1 = 0000002
                                                                        WORD39= 000116
                                                                                                           WORD68 = 000210
T$IBAR= .000024
                                    WORD10= 000024
                                                                        WORD4 = 000010
                                                                                                            WORD69= 000212
T$IBE - = - 020000
                                    WORD11=-000026
                                                                                                           WORDS = 000016
WORD70 = 000214
WORD71 = 000216
WORD72 = 000220
                                                                       WORD40 = 000120
WORD41 = 000122
                                                                                                                                                WORD99=-000306
T$IBF·=·040000
                                    WORD12=-000030
                                                                                                                                               WRDVAL = - 000310
T$ICD - = - 000040
                                    WORD13--000032
                                                                        WORD42= 000124
                                                                                                                                               XTREAD = . 001000
T$MODE = 004000
                                    WORD14= 000034
                                                                        WORD43= 000126
                                                                                                                                                XTWRTE = . 000400
                                    WORD15= 000036
T$0B - - 000036
                                                                       WORD44= 000130
                                                                                                           WORD73= 000222
 . ABS.
            000000
                            000
            равава
                            001
CPBUG2
           002450
                            002
ERRORS · DETECTED:
                           0
VIRTUAL MEMORY USED: 3902 WORDS ( 16 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
ELAPSED TIME: 00:00:58
CPBUG2.CPBUG2/*SP=C20.1JIM.C20.1JCPBUG2
```

```
CPREST- Mg
              RO M1110 27-MAR-80 14:44
                                          4: 44 PAGE 5 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
                                                               .FITLE-GAREST-
.PSECT-CPREST-
        2·
3
          000000
       4567
                                                               HARDWARE QUERY RESOLVER MANUAL DEBUGGING AIDS CONTROL PROCESSOR TEST ROUTINES
                                                               COMMANDS:
       9
                                                                         STORE INTO AN CP REGISTER READ FROM A REGISTER RESET CP
                                                               ST
      10
11
                                                               RE
                                                               RS
                                                               CL
                                                                         CALL HOR LOADER.
      13
14
                                                               ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE CP AT LOCATION
      15
      16
17
18
      19
                                                              STORE.
TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE
      20
21
22
23
          000000
                                                    ST2TBL::
      24
25
          000000
                                   122
                                                               .ASCII
                                                                         ZCRZ
                                                                                                         ; CP · CONTROL · REG ·
          000002
                    000400
                                                               .WORD
                                                                         ST2CR
      26
          000004
                        102
                                   113
                                                               .ASCII
                                                                                                         :BREAKPOINT REG
          000006
                    000414
                                                               .WORD
                                                                         ST2BK-
      28
29
          000010
                                   101
                                                               .ASCII
                                                                         ZMAZ
                                                                                                         :MEMORY-ADDRESS-REG
          000012
                    000440
                                                               .WORD
                                                                         ST2MA
          000014
                        120
                                   101
                                                                         /PA/
      31
                                                                                                        : PIPELINE · REG · A · SECT
          000016
                    000530
                                                               .WORD
                                                                         ST2PA
      32
          000020
                        120
                                   102
                                                               .ASCII
.WORD
          000022
                                                                                                        ; PIPELINE · REG · B · SECT
                    000562
                                                                         ST2PB
      34
          000024
                        120
                                   103
                                                               .ASCII
                                                                         ZPCZ
                                                                                                        : PIPELINE - REG - C - SECT
         000026
000030
      35
                    000614
                                                               .WORD
                                                                         ST2PC
      36
                        120
                                   104
                                                              .ASCII
.WORD
                                                                         /PD/
ST2PD
          000032
                                                                                                        ; PIPELINE · REG · D · SECT
                    000646
      38
39
          000034
                        104
                                   101
                                                               .ASCII
                                                                         /DA/
                                                                                                        ;DMA-ADDRESS-REGISTER
         000036
000040
                    000700
                                                               .WORD
                                                                         ST2DA
      40
                        104
                                   104
                                                               ASCII
                                                                         \angle \mathrm{DD} \angle
                                                                                                        :DMA · DATA · REGISTER ·
      41
          000042
                    000742
                                                               .WORD
                                                                         ST2DD
     42
43
          000044
                                  060
                                                               .ASCII
                                                                         /RØ/
                                                                                                        :CP-REGISTER-0
         000046
000050
                    001100
                                                              .WORD.
                                                                         ST2R0
                        122
                                  Ø61
                                                                         ZR 12
      45
         000052
                    001074
                                                               .WORD
                                                                         ST2R1
     46
47
         000054
                                  062
                                                                   CII
         000056
                    001070
                                                               .WJRD
                                                                         ST2R2
         000060
      48
                                  063
                                                              .ASCII
                                                                         ZR3Z
      49
         000062
                    001064
                                                               .WORD
                                                                         ST2R3
     50
51
         000064
                                  064
                                                               .ASCII
         000066
000070
                    001060
                                                               .WORD
                                                                         ST2R4
     52
53
                                  065
                                                               .ABCII
                                                                         ZR52
         000072
                    001054
                                                               .WORD
                                                                        ST2R5
     54
55
        000074
000076
                        i22
                                  066
                                                               .ASCII
                   0010501
                                                              .WORD
                                                                        ST2R6
         000100
                        122
                                  067
                                                              .ASCII
                                                                        ZR7Z
        000102
                   001044
                                                              .WORD
                                                                        ST2R7
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```

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CPREST- MACRO M1110 27-MAR-80 14:44 PAGE 5-1
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
         000104
                       122
                                070
                                                          .ASCII-
                                                                   /R8/
      59
         000106
                   0010401
                                                          .WORD
                                                                    ST2R8
      60
         000110
                                071
                                                          .ASCII.
.WORD
                                                                    ZR9Z
      6 i
         000112
                   001034
                                                                    ST2R9
         000114
                                101
                       122
                                                          .ASCII
                                                                    ZRAZ
                   001030
      63
         000116
                                                          .WORD
                                                                    ST2RA
     64
65
         000120
                                102
                                                          .ASCII
                                                                    /RB/
         000122
                   0010241
                                                          . HORD
                                                                    ST2RB
         000124
                       122
                                103
                                                          .ASCII
                                                                    ZRCZ
      67
         000126
                   001020°
                                                          .WORD
      68
         000130
                                104
                                                          .ASCII
                                                                    ZRDZ
      69
         000132
                   001014
                                                          .WORD
                                                                    ST2RD
      70
         000134
                                105
                                                          .ASCII
      71
72
         000i36
                   001010
                                                          .WORD
.ASCII
                                                                    ST2RE
         000140
                      122
                                106
                                                                   ZREZ
         000142
                   001004
                                                                   ST2RF
                                                          .WORD
      74
75
                   000031
                                                ST2LN
                                                                    <.-ST2TBL>/4
      76
                                                         READ.
                                                          TABLE OF VALID MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES
      78
         000144
      79
                                                RE2TBL::
     80
         ÑÑÑ 144
                      115
                                101
                                                          .ASCII
                                                                   ZMAZ
                                                                                                ; READ · MEMORY · ADDRESS REG
         000146
                   0012301
                                                          .WORD
                                                                   RE2MA
     82
         000150
                      115
                                120
                                                                   /MP/
RE2MP
                                                          .ASCII
                                                                                                :READ · MICROPGM · ADDRESS
                   0012601
     83
         000152
                                                          .WORD
         000154
     84
                      194
                                104
                                                          .ASCII-
                                                                   ZDDZ
                                                                                                :READ · DMA · DATA · REG
     85
         000156
                   001314
                                                          .WORD
                                                                   RE2DD
     86
         000160
                                060
                                                          .ASCII
                                                                    /RØ/
                                                                                                ;CP·REGISTER·0
     87
         000162
000164
                   001442
                                                          .WORD
.ASCII
                                                                   RE2R0
     88
                      122
                                061
                                                                   /R1/
         000166
                   001436
                                                                   RE2R1
     90
         000170
                      122
                                062
                                                          .ASCII
     91
         000172
                   001432
                                                          .WORD
                                                                   RE2R2
     92
93
         000174
                                063
                                                         .ASCII
                                                                   /R3/
         000176
                   001426
                                                                   RE2R3
     94
         000200
000202
                      122
                                064
                                                          .ASCII.
                                                                   /R4/
     95
                   001422
                                                          .WORD
                                                                   RE2R4
     96
97
         000204
                                065
                                                          .ASCII-
         000206
                   001416
                                                         .WORD
.ASCII
                                                                   RE2R5
     98
         000210
000212
                                Ø66°
                                                                   ZR6Z
                  001412
                                                          .WORD
                                                                   RE2R6
    100
         000214
                                067
                                                          .ASCII
    iāi
         000216
                   001406
                                                                   RE2R7
                                                          .WORD
        000220
000222
000224
    102
                                070
                                                         .ASCII
                                                                   ZR8Z
    103
                  001402
                                                          .WORD
                                                                   RE2R8
    104
                                071
                                                          .ASCII
                                                                   /R9/
        000226
000230
                  001376
    185
                                                         .WORD
                                                                   RE2R9
    106
                      122
                                101
                                                                   /RA/
    107
         000232
                  001372
                                                          .WORD
                                                                   RE2RA
        000234
000236
    108
                                102
                                                          .ASCII
                                                                   ZRBZ
                  001366
122
    109
                                                          .WORD
                                                                  RE2RB
   111 000240
111 000242
112 000244
113 000247
    iiō
        000240
                               103
                                                          ASCII.
                                                                   /RC/
                  901362
                                                          . WORD
                                                                  RE2RC
```

.ASCII

. MORD

.ASCII

/RD/

ZREZ

RE2RD

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122 001356

114 000250

104

The Armen Area and Ar

```
CPREST: MO M1110 27-MAR-80 14:44 PAGE 5-2
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     115 000252
                                                             .WORD -
                                                                       RE2RE....
          000254
                        122
                                  106
                                                             .ASCII. /RF/
     116
                                                                      RE2RF
                    001346
     117
          000256
                                                             .WORD
                                                   RE2LN
                                                                       <.-RE2TBL>/4
     118
                    000023
     119
     120
     121
122
123
                                                             STORES
                                                             PERFORM. THIRD. LEVEL. PARSING.
                                                             EG. IN THE COMMAND:
                                                             CP>ST-0 CR-
PARSE-THE-101
     124
     125
     126
     128-000260
                                                   ST2::
                                                             CALL:
                                                                      FIND
                                                                                                     :FIND-OPERAND-IN-COMMAND-LINE:OK. CONTINUE::NOTHING-THERE
     129 000260
          000264
                                                             BCC.
     130
                    103004
                                                                       1$
          000266
                                                                       ERR4
                                                                                                     RETURN TO TOP OF LOOP (PROMPT)

CONVERT VALUE IN COMMAND LINE TO BINARY
     132.000272
                    000167
                              000636
                                                             JMP -
                                                                       ST2X
     133 000276
                                                   1$:
                                                             CALL
                                                                       PACK
     134 000302
                    103004
                                                             BCC.
                                                                       2$
                                                                       ĒRR5
     135
          000304
                                                             CALL
                    000167
                             000620
     136
          000310
                                                                       ST2X
     137
     138
                                                             CONTINUE PARSING
                                                             FIND THE REGISTER MNEMONIC IN THE COMMAND LINE
     139
     140
     141
          000314
                                                             CALL
                                                                      FIND
                                                   2$:
                                                                                                     :LOCATE · A · NON-BLANK ·
      142-000320
                    103004
                                                             BCC.
                                                                       3$
     143 000322
                                                                       ERR4
                    000167
     144 000326
                              000602
                                                             . PMI.
     145
                                                             MATCH: THE: MNEMONIC: FROM: THE: COMMAND: LINE: AGAINST: THE
     146
      i 47
                                                             TABLE OF VALID MNEMONICS.
     148
          000332 ·
000336
                    012700
                              000031
     149
                                                   3$:
                                                             MOV.
                                                                       #ST2LN,R0
                                                                                                     :NUMBER OF TABLE ENTRIES
     150
                                                             MOV.
                                                                       #ST2TBL,R2
                                                                                                     ;R2·-> TABLE
;MATCH AGAINST COMMAND LINE
                    012702
                              000000
          000342
                                                                       SCAN
                                                             CALL
     152 000346
153 000350
                     103004
                                                             BCC.
                                                                       4$
                                                                                                     OK, CONTINUE
                                                             CALL
                                                                       ERR6
                    000167 000554
          000354
                                                             JMP.
                                                                       ST2X
      155
                                                             SAVE-THE-POINTER-TO-THE-ROUTINE-ASSOCIATED WITH-THE-REGISTER, R1 -> ROUTINE-ADDRESS.
CALL-ROUTINE TO-SCAN-COMMAND-LINE-FOR-LOOP INDICATOR.
     156
     157
      158
                                                             EG. CPST-0 CR-L.
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT.
     160
     161
                                                             JUMP . TO . ROUTINE . TO . LOAD . REGISTER.
      162
     163
                                                                                                     SAVE POINTER TO THE POINT TO POINT TO ROUTINE SECURE ROUTINE
     164 000360
                   010167
                              000000G
                                                   4$:
                                                             MOV-
                                                                       R1.RTHPT
     165 000364
                                                             CALL
MOV:
                                                                       LOOPR -
          000370
                    016701
                              000000G
                                                                       RTHPT.R1
     166
                                                   ST2IN:
     167
          000374
                    000171
                              000000
                                                                       @(R1)
     168
     169
     170
                                                             CP CONTROL REG.
     171
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CPREST MACRO M1110 27-MAR-80 14:44 PAGE 5-3 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     172 - 000400
                                                                                                      :MOVE-DATA TO-LOD-BUS-REG-
:DIRECT-CNTL-WORD-TO CP-
          000400
                               000000G
                                                             MOV-
                                                                       BINWD,-(SP)
     173
                    016746
     174 000404
                                                              CALL
                                                                        CPCR
                                                                       ST2LP
     175
          000410
                    000167
                               000504
                                                              JMP .
                                                                                                       :TEST-LOOP FLAG
     176
                                                              BREAKPÖINT: REG
     178
179
          000414
                                                   ST2BK::
                                                                                                      :SET-CP-CNTL-FOR-BREAKPOINT
:DIRECT-CNTL-WORD-TO-CP
:LOAD-DATA WORD INTO LOAD-BUS-REG
     180
          000414
                    012746
                                                              MOV:
                                                                        #CBKCLKEN,-(SP)
                               000400
          000420
      181
                                                              CALL
                                                                        CPCR
      182
          000424
                               000000G
                                                              MOV.
                                                                        BINWD,
     183
          000430
                                                              CALL
                                                                        LBCP
                                                                                                       :SET-BCE-CNTL-WORD
                                                                        STZLP
                     999167
                               999469
      184
          000434
                                                              .IMP.
                                                                                                       ;TEST-LOOP FLAG-
      185
      186
                                                              MEMORY · ADDRESS · REG ·
      187
      188
          000440
                                                   ST2MA::
                                                                                                      DIRECT CHTL WORD TO CP
          000440
                     012746
                               000230
                                                              MOV-
                                                                        #<PLRWR+PLD>,-(SP)
      190
          000444
                                                                        CPCR
                                                              CALL
      191
          000450
                     012746
                               010000
                                                              MOV.
                                                                        #<MARLOD>.-(SP)
                                                                                                       :SEND MAR LOD BIT
                                                                                                                                               NS
      192.000454
                                                                                                   SEND DATA TO CP
SET MAREN BIT AND AESO
CLEAR PLR D ENABLE BITS
MOVE DATA WORD TO LOD BUS REG
                                                              CALL
                                                                        LBCP
      193
          000460
                     012746
                               000001
                                                              MOV-
                                                                        #<MREN1>, -(SP)
                                                                                                                                               NS
      194
           000464
                                                                        CPCR
                                                              CALL
                                                              MOV.
      195
          000470
                               000000G
                                                                        BINUD, - (SP)
      196
          000474
                                                              CALL
          000500
                     012746
                               000230
                                                                        #<PLRWR+PLD>,-(SP)
                                                              MOV-
      198
          000504
                                                                                                      :DIRECT:CNTL:WORD:TO CP:CR
:CLEAR:PLR-D:BITS:
:SEND:DATA TO:CP:
                                                              CALL
                                                                        CPCR
                                                                                                                                               NS
      199
          000510
                     005046
                                                              CLR
                                                                                                                                               NS.
          000512
      200
                                                              CALL
                                                                        LBCP
                                                                                                                                               NS.
      201
          000516
                                                              CLR.
                                                                        -(SP)
                                                                                                      :CLEAR · CP · CR · BITS ·
: DIRECT · CNTL · WORD · TO · CP · CR ·
                                                                                                                                               NS.
                                                              CALL
JMP
      202
          000520
                                                                        CPCR
                                                                                                                                               NS
      203
          000524
                     000167
                               000370
                                                                        ST2LP
      204
      205
                                                              GP PIPELINE REG SECTION A
      206
      207
                                                                        IF.CSR.#2.IS.SET.UP.FOR.SEARCH.MODE.FOR.ANY.REASON. THESE 4 PIPELINE.ROUTINES.WILL NOT.WORK.!!!!
                                                              NOTE:
      208
          000530
000530
      209
                                                   ST2PA::
      210
                     012746
                               000200
                                                              MOV
                                                                        #PLRWR,-(SP)
          000534
                                                              CALL
                                                                        CPCR
                                                                                                       ;DIRECT-CHTL-WORD-TO CP
     212-000540
                                                              MOV-
                                                                        BINUD: - (SP)
                                                                                                       :MOVE-DATA WORD-TO-LOD-BUS-REG
     213
214
          000544
                                                                        LBCP
          000550
                                                                        -(ŜP)
                     005046
                                                              CLR
      215
          000552
                                                                        CPCR
                                                                                                      : CLEAR THE CONTROL REGISTER : TEST FOR REPEAT
                                                              CALL
                                                                                                                                               NS:
     216
217
          000556
                     000167
                               000336
                                                                        ST2LP
                                                              CP PIPELINE REG-SECTION B.
CAUTION: DO NOT SET BIT 14 DURING THIS TEST, IT WILL LOCK
      218
      219
      220
                                                              HP THE BUS
      221
                                                              ALSO DO NOT USE XXX1, XXX2, XXX6, XXX7, OR XXXA
      223
          000562
                                                   ST2PB::
     224
          000562
                    012746
                               000210
                                                              MEST
                                                                        #<PLRWR+PLB>,-(SP)
                                                                                                       :DIRECT CHATA WORD TO LOD BUS REG
          000566
                                                              CALL
                                                                        CPCR
     226
227
          000572
                     016746
                               000000G
                                                              MOV.
                                                                        BINWD,-(SP)
          000576
                                                              CALL
                                                                        LBCP
                                                                                                       ;SEND DATA TO CP
                                                                                                                                               . . .
                    005046
```

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NS

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CPREST- M
              0 M1110 27-MAR-80 14:44 PAGE 5-4
                                         Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     229 000604
                                                             GALL.
                                                                       CPCR
                                                                                                      : CLEAR · THE · CONTROL · REGISTER ·
                                                                                                                                              NS.
     230 000610 000167 000304
                                                                                                      :TEST.FOR.REPEAT
    231
232
                                                             CP PIPELINE-REG-SECTION-C-CAUTION: DO-NOT-SET-BIT-14 DURING-THIS-TEST: IT-WILL LOCK
     233
234
    235
236
         000614
     237
          000614
                    012746
                              000220
                                                                       #<PLRWR+PLC>,-(SP)
                                                             MOV-
    238
         000620
                                                             CALL
MOV
                                                                       CPCR
                                                                                                     :DIRECT:CNTL:WORD:TO CP:
:MOVE:DATA WORD:TO:LOD:BUS:REG
:SEND:DATA TO:CP:
     239
         000624
                    016746
                              000000G
                                                                       BINWD,-(SP)
     240
         000630
                                                                       LBCP
-(SP)
CPCR
     241
         000634
                    005046
                                                             CLR.
     242
         000636
                                                             CALL
                                                                                                     : CLEAR THE CONTROL REGISTER?
     243
                    000167
                             000252
                                                                       ST2LP -
     244
     245
                                                            246
     247
     248
     249
         000646
     250
         000646
                    012746
                                                                       #<PLRWR+PLD>,-(SP)
                                                             MOV-
     251
         000652
                                                             CALL
                                                                                                     ;DIRECT:CNTL:WORD:TO CP:
;MOVE:DATA WORD:TO:LOD:BUS:REG
;SEND:DATA TO:CP:
     252-000656
                    016746
                              000000G
                                                             MOV-
                                                                       BINWD,-(SP)
    253
         000662
                                                             CA: L
                                                                       LBCP
    254 000666
                    005046
                                                             CLR.
                                                                       -(SP)
    255
256
         000670
                                                                       CPCR
                                                                                                      : CLEAR THE CONTROL REGISTER - INS
         000674
                    000167
                             000220
                                                             JMP.
                                                                       ST2LP -
    257
     258
                                                             WRITE DMA ADDRESS REGISTER
     259
     260
         000700
                                                  ST2DA::
    261 000700
                                                             MOV:
                                                                       #<PLRWR+PLB>,-(SP)
    262-000704
263 000710
                                                             CA: L -
                                                                       CPCR
                                                                                                     :SET-UP-PLR-B
                                                                                                     SET VALUE FOR CONTROL WORD **
SEND WORD TO CP
SET VALUE FOR DMA REG
TRANSFER TO CP
CLEAR CP CONTROL REG
                    012746
                             000005
                                                             MOV.
                                                                       #DMAAWRH,-(SP)
    264 000714
                                                             CALL
    265
         000720
                    016746
                             000000G
                                                             MOV-
                                                                       BINUD,-(SP)
    266
267
         000724
                                                             CALL
                                                                      LBCP
         000730
000732
                    005046
                                                                       -(SP)
                                                             CLR.
                                                            CALL
JMP:
                                                                       CPCR
    269
         000736
                   000167
                                                                      ST2LP:
    270
    270
271
272
273 000742
274 000742 012746
                                                             WRITE DMA DATA REGISTER
                             000210
                                                             MOV.
                                                                       #<PLRWR+PLB>,-(SP)
    275 000746
                                                            CALL
MOV-
                                                                       CPCR
                                                                                                     :SET-UP-PLR-B-
         000752 012746
000756
000762 016746
                                                                                                     SET UP PLR B
SET VALUE FOR CONTROL WORD
SEND WORD TO CP
SET VALUE FOR DMA REG
TRANSFER TO CP
CLEAR CP CONTROL REG
    276
277
                             000004
                                                                      #DMARWRH,-(SP)
                                                             CALL
                                                                      LBCP
    278
                             000000G
                                                             MOV.
                                                                       BINWD,-(SP)
    279 000766
                                                             CALL
                                                                       LBCP
    280 000772
281 000774
                   005046
                                                                       -(SP)
                                                            CLR:
                                                            CALL
                                                                      CPCR
    202-001000 000167 000114
                                                             JMP.
    283
    284
285
                                                            LOAD · CP · REGISTERS
```

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```
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Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     286
287
          001004
                     005267
                               000000G
                     005267
                                                    ST2RE::
ST2RD::
                                                               INC
          001010
                               000000G
                                                                          INDEX
     288
          001014
                     905267
                               000000G
                                                               IHC
                                                                         INDEX-
     289
          001020
                     005267
                               000000G
                                                    ST2RC::
                                                               INC
     290 001024
291 001030
                     005267
                               000000G
                                                    ST2RB::
                                                                          INDEX
                     005267
                               000000G
                                                    ST2RA::
ST2R9::
                                                               INC
                                                                          INDEX
     292
          001034
                     005267
                               000000G
                                                               THE
                                                                          INDEX-
     293
294
295
          001040
                     005267
                               000000G
                                                    ST2R8::
                                                               INC
                                                                          INDEX
          001044
001050
                     005267
                               000000G
                                                    ST2R7::
                                                                          INDEX
                                                               INC
INC
INC
                     005267
                               ARRABAS
                                                    ST2R6::
ST2R5::
                                                                          INDEX
     296
297
          001054
                     005267
                               000000G
                                                                          INDEX
          001060
                     005267
                                                    ST2R4::
                                                                         INDEX
     298
299
          001064
001070
001074
                     005267
                               000000G
                                                    ST2R3::
                                                               INC
                                                                          INDEX-
                     005267
                               000000G
                                                    ST2R2::
                                                               INC
                                                                          INDEX-
     300
                     005267
                                                    ST2R1::
                               000000G
                                                               INC
                                                                          INDEX-
     301
          001100
                                                    ST2R0::
     302.
303 001100
304 001104
                     016700
                               000000G
                                                               MO+1-
                                                                         INDEX, R0
                                                                                                         ; PREPARE . TO . CALL . SUBRITHM
                                                               CALL
CLR
                                                                         LDREG-
                                                                                                        ;LOAD REGISTER
     305
          001110
                     905067
                               000000G
                                                                         INDEX
     306
307
          001114
                     000167
                               000000
                                                               JMP
                                                                         ST2LP
     308
    305
309
310 001120
311 001120
312 001126
391130
                     932767
                               000000G · 0000000G
                                                               BIT.
                                                                         #LOOP, BASE
                                                                                                         :REPEAT ?
     312 001126
313 001130
314
315 001134
                     001402
                                                               BEQ.
                                                                         ST2X
ST2IN
                                                    ST2X:
     316 001134
                                                               CALL -
                                                                         KILL
     317 001140
                     000167
                               000000G
                                                               JMP.
                                                                         CPXX
```

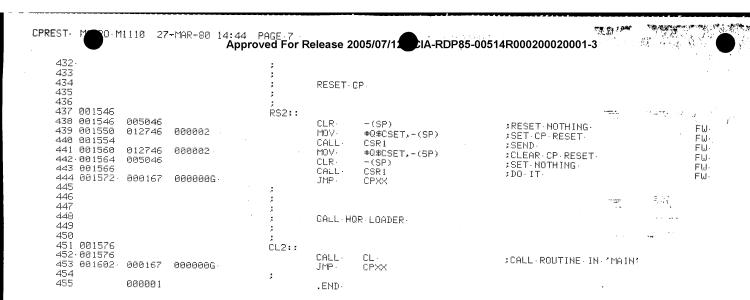
ALL STATES

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CPREST-
               10-M1110 27-MAR-80 14:44 PAGE-6
                                          Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
     319
320
     321
                                                             READ.
     322
                                                              PERFORM. THIRD. LEVEL. PARSING.
     323
                                                             EG. IN THE COMMAND: CP>RE CR
                                                             PARSE THE 'CR
     325
     326
327
     328-001144
                                                   RE2::
     329 001144
                                                                                                      CALL
                                                                        FIND
     330 001150
331 001152
                     103004
                                                             BCC.
                                                                        1$
                                                                        ERR4
          001156
                    000167
                             000346
                                                              JMP -
                                                                        RE2X
     333
     334
                                                              MATCH: THE: REGISTER: MNEMONIC: FROM THE: COMMAND: LINE: AGAINST.
     335
                                                   ;
                                                              THE TABLE OF VALID MNEMONICS.
     336
     337
          001162
                    012700
                               000023
                                                   1$:
                                                             MOV-
                                                                        #RE2LN,RØ
                                                                                                      :NUMBER.OF TABLE.ENTRIES :R2.-> TABLE.
     339
          001166
                    012702
                               000144
                                                             MOV.
                                                                        #RE2TBL,R2
     339
          001172
                                                             CALL
BCC+
                                                                        SCAN
                                                                                                      : MATCH - AGAINST - COMMAND - LINE -
     349
          001176
                     103004
                                                                        2$
                                                                                                      :OK. CONTINUE
     341
          001200
                                                              CALL
                                                                        ERR6
     342
          001204
                    000167
                               000320
                                                              JMP.
                                                                        RE2X
     343
                                                             SAVE-THE-POINTER-TO-THE-ROUTINE-ASSOCIATED WITH-THE-
REGISTER, R1 -> ROUTINE-ADDRESS;
CALL-ROUTINE TO-SCAN-COMMAND-LINE-FOR-LOOP INDICATOR.
EG. CP>RE-CR L-
LOOP-FLAG-WILL-BE-SET-IF-INDATOR IS-PRESENT;
     344
     345
     346
     347
     348
     349
                                                              JUMP TO ROUTINE TO LOAD REGISTER.
     350
     351 001210
                    010167
                              000000G
                                                   2$:
                                                             MOV-
                                                                        R1.RTHPT
                                                                                                      :SAVE - POINTER - TO - RTN :LOOP? -
     352.001214
                                                             CALL
                                                                        LOOPR
                    016701
                               000000G
                                                   RE2IN:
                                                                                                      :POINT TO ROUTINE :EXECUTE ROUTINE
                                                             MOV.
                                                                        RTHPT, R1
     354
355
          001224
                    000171
                               000000
                                                             JMP
                                                                        @(R1)
     356
                                                             MEMORY · ADDRESS · REG ·
     358
359
          001230
                                                   RE2MA::
          001230
     360
                    012746
                              000002
                                                             MOV.
                                                                        #<MAROUT>,-(SP)
         001234
     361
                                                                                                      DIRECT CNTL WORD TO CP:
REQUEST CP TO LOD BUS:
CLEAR THE CONTROL REGISTER
                                                             CALL
                                                                       CPCR
     362
         001240
                                                                        CPLB
                                                             CALL
                                                             CLR.
     363 001244
                    005046
                                                                        -(SP)
                                                                                                                                                NS.
     364 001246
                                                             CALL
                                                                        CPCR
                                                                                                                                                NS
     365 001252
                    012601
                                                                        (SP) + .R1
                                                             MOM
                                                                                                       :CP - WORD - RETURNED - ON STACK
                    000167
     366 001254
                                                             JMP.
                                                                        RE2PUT:
     367
                                                                                                                                    368
                                                             MICROPGM-ADDRESS-REG
     369
     370 001260
                                                   RE2MP::
                                                                                                                    TI I
     371 001260
                    012746
                              000004
                                                             MOV.
                                                                        #CSADRD,-(SP)
     372.001264
                                                                                                      DIRECT CNTL WORD TO CP
REQUEST CP TO LOD BUS
CLEAR THE CONTROL REGISTER
                                                             CALL
                                                                        CPCR
     373 001270
                                                                       CPLB
                                                             CALL:
    374 001274
375 001276
                    005046
                                                             CLR -
                                                                        -(SP)
                                                                                                                                                NS
                                                             CALL
                                                                        CPCR
                                          Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
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CPREST: MACRO: M1110 27-MAR-80 14:44 PAGE: 6-1 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
         001302 012601
                                                                                                 CP-WORD-RETURNED ON STACK
         001304
                   042701
                             176000
                                                          BIC
                                                                    #176000.R1
                                                                                                 :CLEAR · USELESS · BITS
     378
379
                                                          .TMP
         001310
                   000167
                             000146
                                                                    RE2PUT -
     380
381
                                                          READ DMA DATA REGISTER
     382·001314
383 001314
                                                RE2DD::
                   012746
                             000210
                                                          MOV
                                                                    #<PLRWR+PLB>,-(SP)
         001320
                                                                                                 DIRECT-CNTL-WORD-TO CP-
SET-VALUE FOR-CONTROL-WORD
SEND-DATA TO-CP-
     384
                                                          CALL
                                                                    CPCR
     385
          001324
                                                                    #DMARRDH,-(SP)
                   012746
                             000003
                                                          MOV.
     386
         001330
                                                          CALL
                                                                    LBCP
     387
         001334
                                                          CALL
                                                                    CPLB
                                                                                                 :READ FROM CP
          001340
                                                                                                 :LOAD VALUE INTO R1 FOR PRINT
     388
                   012601
                                                                    (SP) + .R4
                                                          MOV:
                   000167
                                                          JMP
                                                                    RE2PUT.
     390
                                                          PRINT-CP-REGISTERS
     391
     392
     393
          001346
                    005267
                             000000G-
                                                 RE2RF::
                                                                    INDEX:
         001352
001356
001362
     394
                    005267
                             000000G
                                                 RE2RE::
     395
                                                RE2RD::
RE2RC::
                    005267
                             000000G
                                                                    INDEX
     396
                    005267
                             000000G
                                                          INC
                                                                    INDEX
     397
          001366
                    005267
                             000000G
                                                 RE2RB::
                                                                    INDEX
     398
          001372
                    005267
                             000000G
                                                 RE2RA::
     399
          001376
                    005267
                             000000G
                                                 RE2R9::
                                                          INC
                                                                    INDEX
     400
          001402
                    005267
                                                 RE2R8::
                             000000G
                                                          THO
                                                                    INDEX
                             000000G
     40 i
          001406
                    005267
                                                 RE2R7::
                                                                    INDEX
         001412
                    005267
                                                RE2R6::
RE2R5::
     492
                             000000G
                                                          INC
                                                                    INDEX
     403
          001416
                    005267
                             000000G
                                                          INC
                                                                    INDEX
     404
          001422
                    005267
                             000000G
                                                 RE2R4::
                                                          INC
                                                                    INDEX
          001426
001432
                   005267
005267
     495
                             000000G
                                                 RE2R3::
     406
                             000000G ·
                                                 RE2R2:: INC
                                                                    INDEX
                    005267
     407
          001436
                             000000G
                                                 RE2R1:: INC
                                                                    INDEX
     408
          001442
                                                 RE2R0::
                                                                                                 :PREPARE TO CALL SUBRIN
     409
          001442
     410
                    016700
                             000000G
                                                          MOV-
                                                                    INDEX, RØ
     411
          001446
                                                          CALL
CLR:
                                                                    REREG:
          001452
                    005067
                             000000G
                                                                    INDEX
     413
          001456
                    000167
     414
     415
                                                                                                 #PRINTED:ONCE:?:
#YES. SKIP
#SET:FLAG:FOR:PRINTED:ONCE:
          001462
                    032767
                             000000G-000000G-RE2PUT:
                                                          BIT
                                                                    #ONCE,BASE
          001470
001472
                    001011
     417
                                                                    #ONCE,BASE
     418
                    052767
                             000000G:000000G
                                                          BIS
          001500
                                                                    #PRINT, R5
                    012705
                             000000G ·
                                                                                                 :POINT TO PRINT LINE
:CONVERT VALUE IN RA FOR PRINTING
:PRINT ON CONSOLE
                                                          MOV.
     420
          001504
                                                                    ÜNPK
                                                          CALL
     421
422
          001510
                                                          CALL
     423
          001514
                    032767
                             000000G 000000G 1$:
                                                                    #LOOP, BASE
                                                          BIT
                                                                                                 REPEAT:
     424
          001522
                    001402
                                                          BEQ
                                                                    RE2X
     425
          001524
                    000167
                              177479
                                                          JMP
                                                                    RE2IN-
                                                                                                 :EXECUTE - ROUTINE - AGAIN -
     426
     427
          001530
     428 001530
429 001536
                    042767
                             000000G-000000G-
                                                          віс.
                                                                    #ONCE,BASE
                                                                                                  ;CLEAR-PRINT-CONTRÖL FLÄG???
                                                                                                                           FLAG.
                                                          CALL.
JMP.
                                                                    KILL
CPXX
                                                                                                  THE PERSON NAMED IN
```

A JAN DE

100



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CPREST: MACRO: M1110 27-MAR-80 14:44 PAGE: 7-1
SYMBOL: TABLE: Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
 ALUCKE = · 040000
                                                             BYTE40= 000050
                                                                                                                          BYTE92=-000134
                                                                                                                                                                                     MMLEFT= : 000002
                                                                                                                                                                                                                                                 Q$M$ET= 000004
Q$M$P = 100000
Q$NCLK= 176000
 ALU0E - - 004000
                                                             BYTE41 = 000051
                                                                                                                          BYTE93= 000135
                                                                                                                                                                                     MMOE = 000004
MMWRTE= 000010
 A01 = 010000
BASE = ******* ናረ
                                                              BYTE42=-000052
                                                                                                                          BYTE94= 000136
                                                             BYTE43 = . 000053
                                                                                                                          BYTE95= 000137
                                                                                                                                                                                     MNOBRE= 100000
                                                                                                                                                                                                                                                              = 000100
 BINUD = ***** GX
                                                                                                                          BYTE96= 000140
BYTE97= 000141
                                                             BYTE44= 000054
                                                                                                                                                                                     MREN1 = 000001
MREN2 = 020000
                                                                                                                                                                                                                                                 0$PPSW= 000320
 BITVAL=.000000
                                                             BYTE45= 000055
                                                                                                                                                                                                                                                 Q$PP2 = 000300
BIT0 = 000001
BIT1 = 000002
                                                             BYTE46= 000056
                                                                                                                          BYTE98= 000142
                                                                                                                                                                                     MSYN = 000040
                                                                                                                                                                                                                                                  Q$QHLT= 000013,
                                                                                                                         BYTE99= 000143
BYTVAL= 000144
                                                             BYTE47 = - 000057
                                                                                                                                                                                                   = 000144
                                                                                                                                                                                                                                                 0$QL = 000043
Q$QLA = 000053
 BIT10 = 002000
                                                             BYTE48= 000060
                                                                                                                                                                                     ONCE -
                                                                                                                                                                                                    = · ***** GX
 BIT11 = 004000
BIT12 = 010000
                                                             BYTE49= 000061
                                                                                                                          CBKALL = 001000
                                                                                                                                                                                     PACK -
                                                                                                                                                                                                   = · ******** GX ·
                                                                                                                                                                                                                                                  Q$QLB · = · 000054
                                                             BYTE5 = 000005
BYTE50 = 000062
                                                                                                                          CBKCLK= 000400
                                                                                                                                                                                     PLB.
                                                                                                                                                                                                                                                 Q$QLR -= 000001
Q$QW = 000042
  BIT13 = 020000
                                                                                                                          CL
                                                                                                                                      = · ******* GX
                                                                                                                                                                                     PLC
                                                                                                                                                                                                    = 000020
                                                                                                                         ČĽ2
 BIT14 = 040000
BIT15 = 100000
                                                             BYTE51= 000063
                                                                                                                                            001576RG
                                                                                                                                                                                     PLD = 000030
PLRUR = 000200
                                                                                                                                                                           002
                                                                                                                                                                                                                                                 Q$RDCD= 000005
                                                             BYTE52 = . 000064
BYTE53 = . 000065
                                                                                                                          CNOBRE = 100000
                                                                                                                                                                                                                                                  Q$RDMD= 000006
 BIT2 =
                     000004
                                                                                                                          CONSOL = · ******
                                                                                                                                                                                     PLR.EN= 000200
                                                                                                                                                                                                                                                 Q$REBK = . 001000
Q$RNC . = . 006000
Q$RSC . = . 004000
                = 000010
= 000020
                                                             BYTE54= 000066
                                                                                                                         CPCCEN= 010000
                                                                                                                                                                                     PRINT: = · ****** GX ·
                                                                                                                         CPCR · = · ******* GX · CPLB · = · ****** GX ·
 BIT4
                                                             BYTE55= 000067
                                                                                                                                                                                     QR$CR1= 176420
                = 000040
 BIT5
                                                             BYTE56= 0000070
                                                                                                                                                                                     QR$CR2= · 176422
                                                                                                                                                                                                                                                 Q$RSET= 000010
                = 000100
                                                             BYTE57= 000071
                                                                                                                         CPREAD = . 040000
CPWRTE = . 020000
                                                                                                                                                                                     QR$LBR = . 176424
                                                                                                                                                                                                                                                 Q$SM = 100000
 BIT7
                = 000200
                                                             BYTE58- 000072
                                                                                                                                                                                     Q$ATTN= 000100
                                                                                                                                                                                                                                                                     000120
                                                                                                                                                                                                                                                 Q$SP
                = 000400
 BIT8.
                                                             BYTE59= 000073
BYTE6 = 000006
                                                                                                                         CPXX: = жжжжжж GX:
                                                                                                                                                                                     Q$BCL -= 000001
Q$CCCP= 000040
                                                                                                                                                                                                                                                 0$SP2 =
                                                                                                                                                                                                                                                                    000340
                = 001000
                                                                                                                         CSADRD = . 000004
                                                                                                                                                                                                                                                 REREG - ****** GX
 BYTE0 = 000000
BYTE1 = 000001
                                                             BYTE60= 000074
                                                                                                                         CSEQCI=-100000
CSOE- =-000040
CSR1 =-******** GX-
                                                                                                                                                                                     Q$CHB - - 000400
                                                                                                                                                                                                                                                 RE2DD
RE2DD
                                                                                                                                                                                                                                                                     001144RG
                                                                                                                                                                                                                                                                                                   ดดว
                                                             BYTE61= 0000075
                                                                                                                                                                                     Q$CHRL=.000200
Q$CLR.=.000040
                                                                                                                                                                                                                                                                     ÕÕ IS (4RG
                                                                                                                                                                                                                                                                                                   002
 BYTE10= 000012
                                                             BYTE62=-000076
BYTE63=-000077
                                                                                                                                                                                                                                                                     001220R
                                                                                                                                                                                                                                                                                                   002
 BYTE11= 000013
                                                                                                                         CSWRTE = - 000100
                                                                                                                                                                                     Q$CNC - - 030000
                                                                                                                                                                                                                                                 REZUM =
                                                                                                                                                                                                                                                                    1000023 G
 ชYTE12= 000014
                                                             BYTE64= 000100
                                                                                                                         DBR.RD= 0000001
DB$CPP= 001457
                                                                                                                                                                                     Q$CP· = 000060
                                                                                                                                                                                                                                                                    001230RG
001260RG
                                                                                                                                                                                                                                                 RE2MA
                                                                                                                                                                                                                                                                                                   002
 BYTE13= 000015
                                                             BYTE65= 000101
                                                                                                                                                                                     Q$CPCC= 000010
                                                                                                                                                                                                                                                 RE2MP
                                                                                                                                                                                                                                                                                                   002
 BYTE14= 000016
                                                             BYTE66= 000102
                                                                                                                         DB$SPT= 000026
                                                                                                                                                                                     Q$CP2·=·000260
Q$CSC·=·010000
                                                                                                                                                                                                                                                 RE2PUT
                                                                                                                                                                                                                                                                     001462R
                                                                                                                                                                                                                                                                                                   002
 BYTE15= 000017
                                                             BYTE67=:000103
                                                                                                                         DB$TPC= 000023
                                                                                                                                                                                                                                                 RE2RA
                                                                                                                                                                                                                                                                     001372RG
                                                                                                                                                                                                                                                                                                   002
                                                             BYTE68=-000104
BYTE69=-000105
 BYTE16= 000020
                                                                                                                         DISPGS=-100000
                                                                                                                                                                                     Q$CSEL = 000360
                                                                                                                                                                                                                                                 RE2RB
                                                                                                                                                                                                                                                                     001366RG
 BYTE17=-000021
                                                                                                                         DMAAWR = . 000005
                                                                                                                                                                                     Q$CSET= . 000002
                                                                                                                                                                                                                                                 REZRO
                                                                                                                                                                                                                                                                     001362RG
                                                                                                                                                                                                                                                                                                   002
 BYTE18= 0000022
                                                             BYTE7 = 000007
                                                                                                                                                                                     Q$CSP - = · 020000
Q$DMA - = · 000001
Q$ENBK = · 040000
                                                                                                                         DMARRD = . 000003
                                                                                                                                                                                                                                                 RE2RD
                                                                                                                                                                                                                                                                     001356RG
                                                                                                                                                                                                                                                                                                   002
BYTE19= 000023
BYTE2 = 000002
                                                             BYTE70= 000106
                                                                                                                         DMARWR = . 000004
                                                                                                                                                                                                                                                 RE2RE
                                                                                                                                                                                                                                                                     001352RG
                                                                                                                                                                                                                                                                                                   ดดว
                                                            BYTE71= 000107
BYTE72= 000110
                                                                                                                         ENBR - = · 010000
ERR4 = · *******
                                                                                                                                                                                                                                                 RE2RF
                                                                                                                                                                                                                                                                     001346RG
                                                                                                                                                                                                                                                                                                   002
 BYTE20= 000024
                                                                                                                                                                                     Q$ENOP= 020000
                                                                                                                                                                                                                                                 RE2R0
                                                                                                                                                                                                                                                                     001442RG
 BYTE21= 000025
                                                             BYTE73= 000111
                                                                                                                                      = ****** GX
= *****
                                                                                                                         ERR5
                                                                                                                                                                                     Q$FAL - = - 004000
                                                                                                                                                                                                                                                 RE2R1
                                                                                                                                                                                                                                                                    001436RG
                                                                                                                                                                                                                                                                                                   992
BYTE22= 000026
                                                             BYTE74=-000112
                                                                                                                         ERR6
                                                                                                                                                                                     Q$FC - - 000045
Q$FO - - 000044
Q$FP - - 000046
                                                                                                                                                                                                                                                 RE2R2
                                                                                                                                                                                                                                                                    001432RG
 BYTE23= 000027
                                                                                                                                                                                                                                                                                                   йй2
                                                                                                                                       = ****** GX
                                                             BYTE75= 000113
                                                                                                                         FIND
                                                                                                                                                                                                                                                 RE2R3
                                                                                                                                                                                                                                                                                                   002
                                                                                                                                                                                                                                                                     001426RG
                                                             BYTE76= 000114
 BYTE24= 000030
                                                                                                                         INDEX = ******** GX**
KILL = ******* GX**
LBCP = ******** GX**
                                                                                                                                                                                                                                                 RF2R4
                                                                                                                                                                                                                                                                    001422RG
 BYTE25=-000031
                                                             BYTE77= 000115
                                                                                                                                                                                     Q$HBF · = · 000002
                                                                                                                                                                                                                                                 RE2R5
                                                                                                                                                                                                                                                                    001416RG
                                                                                                                                                                                                                                                                                                   002
BYTE26= 000032
BYTE27= 000033
                                                             BYTE78= 000116
                                                                                                                                                                                     Q$ICP·=·000005
Q$IHB·=·000003
                                                                                                                                                                                                                                                 RE2R6
                                                                                                                                                                                                                                                                     001412RG
                                                            BYTE79= 000117
BYTE8 = 000010
                                                                                                                                                                                                                                                                                                   002
                                                                                                                         LDREG = · ****** GX
                                                                                                                                                                                                                                                                     001406RG
                                                                                                                                                                                                                                                 RE2R7
                                                                                                                                                                                                                                                                                                   002
BYTE28= 000034
                                                                                                                                                                                     Q$IHRL= 000002
                                                                                                                         LOC.EN=-000100
                                                                                                                                                                                                                                                 RE2R8
                                                                                                                                                                                                                                                                    001402RG
                                                                                                                        LOC.WA = 040000
LOC.WB = 100000
LOCP = ******** GX-
LOOPR = ******** GX-
 BYTE29 = · 000035
                                                             BYTE80 = 000120
                                                                                                                                                                                     Q$IMRP=.000007
                                                                                                                                                                                                                                                 RE2R9
                                                                                                                                                                                                                                                                    001376RG
000144RG
                                                                                                                                                                                                                                                                                                   002
                                                            BYTE81= 000121
BYTE82= 000122
BYTE3 = 000003
                                                                                                                                                                                    Q$LBD - = .001000
Q$LBDP = .001001
                                                                                                                                                                                                                                                 RE2TBL
                                                                                                                                                                                                                                                                                                   002
BYTE30= 000036
                                                                                                                                                                                                                                                 RE2X
                                                                                                                                                                                                                                                                                                   002
BYTE31= 000037
                                                            BYTE83 - 000123
                                                                                                                                                                                     Q$LBP - = - 000001
                                                                                                                                                                                                                                                 RGQ.EN= 000200
BYTE32= 000040
BYTE33= 000041
BYTE34= 000042
                                                            BYTE84= 000124
                                                                                                                         MAREN 1 = 000001
                                                                                                                                                                                     Q$LDCD= 000003
                                                                                                                                                                                                                                                 RGQ.VA= 020000
                                                             BYTE85=-000125
                                                                                                                         MAREN2 = . 004000
                                                                                                                                                                                     Q$LDMD= 000004
Q$LDPP= 002000
                                                                                                                                                                                                                                                                    001546RG
                                                                                                                                                                                                                                                                                                  002
                                                                                                                         MARLOD= 010000
MAROUT= 000002
                                                            BYTE86 = . 000126
                                                                                                                                                                                                                                                 RTNPT -- ***** GX
BYTE35= 000043
                                                            BYTE87 = 000127
                                                                                                                                                                                     Q$LHP·=·010000
                                                                                                                                                                                                                                                              = · жожножож GX
                                                                                                                                                                                                                                                 SCAN
BYTE36= 000044
BYTE37= 000045
                                                            BYTE88= 000130
                                                                                                                        MAR.LO= 002000
MAR.OU= 000040
                                                                                                                                                                                     Q$MNC·=·140000
                                                                                                                                                                                                                                                 SEQ.CI= 000010
                                                                                                                                                                                     0$MRP:=:000040
                                                            BYTE89=-000131
                                                                                                                                                                                                                                                            MAN SERVER STATE OF THE SERVER                                                                                                                                                                                                                                                                                                    002.
002
BYTE38= 000046
                                                            BYTE9 = 000011
                                                                                                                         MBKALL= 001000
                                                                                                                                                                                                                                                    T2Bk
                                                                                                                                                                                                                                                                     000414RG
BYTE39= 000047
                                                            BYTE90= 000132
                                                                                                                        MBKCLK= 000400
                                                                                                                                                                                                                                                 STZCR
                                                                                                                                                                                     Q$MRP2=.000240
                                                                                                                                                                                                                                                                `^^000400RG
                                                                                                                                                                                                                                                                                                   002
BYTE4 = 000004
                                                            BYTE91 = . 000133
                                                                                   00133 MMADRD = 000100 OSMSC = 040000 STZDA                                                                                                                                                                                                                                                                     000700RG
```

The same of

```
0 M1110 27+MAR+80 14:44 PAGE:7+2:
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SYMBOL . T
ST2DD-
               000742RG
                                    002-TD$OAR=:176344
                                                                                       T$SC: =:000022:
T$SCLK=:020000
T$SEG!=:000000
                                                                                                                                  WORD33=-000102
                                                                                                                                                                             WORD68= 000210
                                                                                                                                                                             WORD68= 000210
WORD69= 000212
WORD7 = 00016
WORD70= 000214
WQRD71= 000216
WORD72= 000220
ST2IN:
ST2LN:
              000370R
000031 G
                                    002 · TD$OTR= · 176346
                                                                                                                                  WORD34= 000104
WORD35= 000106
                                           TD$QRD= 000274
              001120R
ST2LP
                                    002·TD$SW·=·176376
                                                                                       T$SEG2=-000001
                                                                                                                                  WORD36= 000110
                                    002 · TD$TAR = · 176372
002 · TD$TAW = · 176362
                                                                                       T$SEG3= 000002
T$SO = 000001
T$UBUS= 100000
ST2MA
ST2PA
              000440RG
                                                                                                                                  WORD37=-000112
              000530RG
                                                                                                                                  WORD38=-000114
WORD39=-000116
                                                                                                                                                                            WURD72= 000220
WORD73= 000222
WORD74= 000224
WORD75= 000226
WORD76= 000230
WORD77= 000232
ST2PB
                                    002 · TD$TDR= · 176374
               000562RG
                                                                                       T$1CLK=-000400
ST2PC
               000614RG
                                    002·TD$TDW= 176364
                                                                                                                                  WORD4 = 000010
                                    002 · T$AD · = · 000020
002 · T$BA · = · 000002
002 · T$BD · = · 000010
                                                                                       T$8BEN= 000020
ST2PD:
               000646RG
                                                                                                                                  WORD40= 000120
ST2RA
                                                                                      UBD.IN= 000020
UNPK = ****** GX-
WCRD0 = 000000
WORD1 = 000024
WORD10= 000024
              001030RG
                                                                                                                                  WORD41=-000122
WORD42=-000124
WORD43=-000126
ST2RB
               001024RG
                                    002 · T$BSO · = · 100000
002 · T$BT · = · 000020
ST2RC
               001020RG
                                                                                                                                 WORD44=-000120
WORD44=-000130
WORD45=-000132
WORD46=-000134
WORD47=-000136
ST2RD
               001014RG
                                                                                                                                                                             WORD79= 000236
                                                                                                                                                                          WORD79 = 888256
WORD89 = 888240
WORD89 = 888240
WORD87 = 888242
WORD82 = 888242
WORD85 = 8882246
ST2RE
               001010RG
                                    002
                                           ·T$BTAR= ·000030
                                    002 T$BTD = 002000
002 T$CD = 000100
002 T$CLK = 002000
ST2RF
               001004RG
                                                                                       WORD11-000026
                                                                                       WORD12= 000030
WORD13= 000032
WORD14= 000034
ST2RØ
               001100RG
               001074RG
                                                                                                                                 WORD44 - 000140
WORD49 - 000142
WORD5 - 000012
WORD50 - 000144
ST2R1
ST2R2
               001070RG
                                    002 · T$DISK = · 000200
ST2R3
               001064RG
                                    002 · T$DRD · = · 000004
                                                                                       WORD 15 = 0000036
                                                                                                                                                                             WORD84= 000250
                                    002 · T$EMEM= · 010000
ST2R4
               001060RG
                                                                                       WORD16= 000040
                                                                                                                                                                             WORD85= 000252
WORD86= 000254
                                                                                      WORD18=-000042
WORD18=-000044
WORD19=-000046
WORD2-=-000004
                                                                                                                                 WORD50= 000144
WORD51= 000146
WORD52= 000150
WORD53= 000152
WORD54= 000154
ST2R5
                                    002 · T$FSAA = ·000000
002 · T$FSAB = ·000004
               001054RG
ST2R6
               001050RG
                                                                                                                                                                             WORD87 = 000256
ST2R7
                                           -T$FSAC=-000014
               001044RG
                                    002
                                                                                                                                                                             WORD88= 000260
WORD89= 000262
WORD9 = 000022
ST2R8
               001040RG
                                    002·T$FSB2=-000010
                                   002:T$F$B2=.000010
002:T$IBAR=.000026
002:T$IBE+=.020000
T$IBF-=.040000
T$IBF-=.040000
T$MODE=.004000
T$OBE-=.004000
T$OBE-=.004000
T$OBE-=.010000
ST2R9
               001034RG
                                                                                       WORD20= 000050
                                                                                                                                  WORD55= 000156
ST2TBL
              000000RG
                                                                                       WORD21=-000052
WORD22=-000054
WORD23=-000056
                                                                                                                                  WORD55=-000160
WORD57=-000162-
WORD58=-000164
                                                                                                                                                                             WORD90= 000264
ST2X· 001134F
S$CLR·=·000000
                                                                                                                                                                             WORD91= 000266
WORD92= 000270
S$LA· = 0000001
S$QB· = 000005
                                                                                       WORD24= 000060
WORD25= 000062
WORD26= 000064
                                                                                                                                  WORD59= 000166
                                                                                                                                                                             WORD93= 000272
                                                                                                                                  WORD6 = 000014
WORD60= 000170
                                                                                                                                                                             WORD94= 000274
                                                                                                                                                                             WORD95= 000276
WORD96= 000300
S$QR · = 000006
S$QX · = 000004
                                                                                       WORD27= 000066
                                                                                                                                  WORD61= 000172
S$SR. = 0000007
                                                                                       WORD28=-000070
WORD29=-000072-
WORD3 =-000006
                                                                                                                                  WORD62= 000174
                                                                                                                                                                             WORD97= 000302
$$$1 = 0000010
$$$2 = 000014
TD$CTR= 176370
                                            T$0BRA= 000034
                                                                                                                                  WORD63= 000176
WORD64= 000200
                                                                                                                                                                             WORD98÷ 0003049
WORD99÷ 000306
                                            T$0BWA=-000032
                                           T$0UTA= · 100000
T$RBD0= · 000200
                                                                                       WORD30=-0000074
WORD31=-000076
WORD32=-000100
                                                                                                                                  WORD65= 000202
                                                                                                                                                                             WRDVAL = . 000310
 TD$CTW= 176360
                                                                                                                                  WORD66= 000204
WORD67= 000206
                                                                                                                                                                              XTREAD= 001000
                                           T$RNB - = -000040
T$RSET = -040000
 TD$INL= 004000
                                                                                                                                                                              XTURTE = 000400
TD$MEM= . 000270
 . ABS:
               000000
                                   000
              000000
                                   001
CPREST: 001606
                                  002
ERRORS · DETECTED:
VIRTUAL MEMORY USED: 3426 WORDS ( 14 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
ELAPSED TIME: 00:00:50
CPREST, CPREST/-SP=[20,1]IM,[20,1]CPREST
```

CPREST-

```
CPLD-
                  0 M1110 27-MAR-80 14:43 PAGE 5
                                                 Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
                                                                        .FITLE-GRED.
           . 000000
        23456789
                                                                       MEMORY LOAD ROUTINES
        10
                                                                       COMMANDS:
       11
12
                                                                       LD
                                                                                   LOAD CP-MEMORIES.
                                                                       ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED) THIS MODULE RETURNS CONTROL TO THE MODULE MRP AT LOCATION
        13
        14
15
16
17
                                                                        1CPXX1.
        18
19
                                                               ******************
                                                                       NOTE:
THE.GOMMAND.TO.LOAD.CP DATA.MEMORY.CANNOT.BE.USED.
UNLESS.MRP.MICROPROGRAM.MEMORY.AND.CP.CONTROL.STORE.
HAVE.BEEN.LOADED.VIA.THE.1LOADER? PROGRAM:
       20
21
22
23
24
25
26
27
                                                                       IF THE OEX MEMORIES ARE EITHER LOADED OR PRINTED AFTER OP DATA MEMORY HAS BEEN LOADED, CP DATA MEMORY CONTENTS
                                                                       ARE LOST:
       .MCALL - WTSE$S.CLEF$S.
                                                                       {\tt TABLE} \cdot {\tt OF} \cdot {\tt VALID} \cdot {\tt CP} \cdot {\tt MEMORY} \cdot {\tt MNEMONICS} \cdot {\tt AND} \cdot {\tt ADDRESSES} \cdot {\tt OF}
                                                                       ASSOCIATED ROUTINES
            роворо
                                                           LD2TBL::
        39
            000000
                            103
                                        123
                                                                        .ASCII-
                                                                                                                       :LOAD MICROPGM MEMORY
        40
            000002
                        000272
                                                                        .WORD
                                                                                   LD2CS
        41
            000004
                            103
                                         104
                                                                        .ASCII
                                                                                    ZCDz
                                                                                                                       ;LOAD DATA MEMORÝ
        42
           000006
0000010
                        0004721
                                                                        .WORD
                                                                                   LD2CD -
        43
                        110
000734
                                        114
                                                                        .ASCII
                                                                                    /HL/
                                                                                                                       :LOAD·HRL·BUFFER
        44
            000012
                                                                                   LD2HL
                                                                        .WORD
        45
            000014
                            102
                                        114
                                                                        .ASCII-
                                                                                   ZBLZ
                                                                                                                       ;LOAD-BCL
       46
47
48
                        001114
            000016
                                                                        .WORD
                                                                                   LD2BL
                        000004
                                                            LD2LH
                                                                                    <.-LD2TBL>/4
       49
50
51
52
53
54
55
56
                                                                       LOHD
PERFORM: THIRD: LEVEL: PARSING:
EG. IN: THE: COMMAND:
CP>LD: CD: 0
PARSE: TH: "CD"
           000020
                                                 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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CPLD----MACRO-M1110 27-MAR-80 14:43 PAGE-5-1
                                                                                      Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                    000020
                                                                                                                               CALL
                                                                                                                                                    FIND
                                                                                                                                                                                                                   ;LOCATE THE MEMORY MNEMONIC IN THE COMMAND LINE.
             59 000024
                                                                                                                              BCC.
                                                                                                                                                    1$
                                                                                                                                                                                                                   OK, CONTINUE.
             60
                    000026
                                                                                                                              CALL:
                                                                                                                                                    ERR4
                                                                                                                                                                                                                   :'MISSING OPERAND:
                    000032 000167
             61
                                                               001236
                                                                                                                               JMP.
                                                                                                                                                                                                                   :EXIT-
             62
                                                                                                         ż
              63
                                                                                                                              MATCH-MNEMONIC-IN-THE-COMMAND-LINE-AGAINST TABLE-OF-VALID-MNEMONICS
                                                                                                         ;
             64
             65
                    000036
000042
                                          012700
                                                               000004
                                                                                                                                                                                                                   :NUMBER:OF TABLE:ENTRIES:
:POINT:TO:TABLE:
:MATCH:AGAINST:COMMAND:LINE:
                                                                                                                                                    #LD2LN,R0
             66
                                          012702
                                                                                                                               MOV:
                                                                                                                                                    #LD2TBL,R2
              67
                     000046
                                                                                                                              CALL
BCC+
                                                                                                                                                    SCAN
             68
                     000052
                                           103004
                                                                                                                                                    2$
                                                                                                                                                                                                                   :MATCH WAS MADE
             69
                     000054
                                                                                                                                                    ERR7
                                                                                                                               CALL
                                                                                                                                                                                                                   ; "INVALID - MEMORY - MNEMONIC:
                     000060
                                          000167
                                                               001210
                                                                                                                               JMP .
                                                                                                                                                   LD2X
             72
73
                                                                                                                              SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC. SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
                                                                                                                              1. START-ADDRESS-ONLY, REPEAT-PROMPT-FOR-EACH-MEMBRY-LOGATION. . . . FROM THE START-ADDRESS-FORWARD, NB, END OF MEMORY (AS-DETECTED-BY-THE-QMAIN-SUBROUTINE-PDATA) OR A <CR> RESPONSE TO THE PROMPT
             75
76
             78
79
                                                                                                                                       WILL TERMINATE THE LOAD.
                                                                                                                                       CP>LD CD 0
                                                                                                                                      CP/LD CD 00

CP/LD CD 00

CP/LD CD 00

CP/LD CD 01

CP/LD CD 01

CP/LD CD 01

CP/LD CD 02

CP/LD CD 03

CP/LD CD 04

CP/LD CD 04

CP/LD CD 05

CP/LD
              80
             81
             82
             83
             84
             85
             86
                                                                                                                                       GP>LD⋅CD⋅0 7
              87
                                                                                                                                      START ADDRESS, END ADDRESS, LOOP INDICATOR: ISSUE ONLY ONE PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START AND END ADDRESSES) WITH THIS VALUE.
             88
             89
             90
                                                                                                                                      CP>LD-CD-0 7 L
             91
             92
             93
                    000064
                                         010167
                                                              000000G
                                                                                                                              MOV:
                                                                                                                                                   R1.RTNPT
                                                                                                                                                                                                                   ;SAVE POINTER:
;LOCATE START ADDRESS IN COMMAND LINE
;OK, CONTINUE
                     000070
             94
                                                                                                                              CALL
                                                                                                                                                   FIND
             95
                     000074
                                          103004
                                                                                                                              BCC
                                                                                                                                                    3$
             96
                     000076
                                                                                                                                                   ERR4
                                                                                                                              CALL
                                                                                                                                                                                                                   :'MISSING-OPERAND:
             97
                     000102
                                          000167
                                                                                                                               JMP .
                                                                                                                                                   LD2X
                                                                                                                                                                                                                   :EXIT
             98
                    000106
                                                                                                                                                                                                                   CONVERT COMMAND LINE VALUE TO BINARY CONVERSION SUCCESSFUL
                                                                                                         3$:
                                                                                                                              CALL
                                                                                                                                                   PACK
                    000112
                                          103004
                                                                                                                              BCC.
                                                                                                                                                    4$
           100
                    000114
                                                                                                                              CALL
                                                                                                                                                   ERR5
                                                                                                                                                                                                                   ; "INVALID NUMERIC VALUE"
           10 i
                    000120
                                          000167
                                                               001150
                                                                                                                                                   LD2X
           102
                                                               000000G 000000G 4$:
           103
                                         016767
                                                                                                                                                   BINWD.MSTRT.
BINWD.MSTR2.
                                                                                                                              MOV-
                                                                                                                                                                                                                  #SAVE LOADING START ADDRESS #SAVE IT TWICE (FOR REFRESH ON LOOP) #INIT END ADDRESS
           104
                    000132
                                         016767
                                                               000000G · 000000G ·
                                                                                                                              MOV
           105 000140
                                         012767
                                                               177777
                                                                                    000000G
                                                                                                                                                   #-1,MEND.
           106
                                                                                                                              START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE), IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
           107
           108
           109
          110
                    000146
                                                                                                                              CALL
                                                                                                                                                   FIND
                                                                                                                                                                                                                  SCAN COMMAND LINE
SOMETHING SHERE
SIGNAL TO REPEAT PROMPTHY A SHERE
JUMP TO RTN
          112.000152.
113 000154
                                        103004
                                                                                                                              BCC
                                                                                                                                                   5$
                                        052767
                                                                                                                                                   #RP,BASE
                                                              000000G · 000000G ·
                                                                                                                             BIS.
                    000162
                                        000437
                                                                                                                                                     9$
                                                                                                                              BR
                                                                                                                                                                          CIA-RDP85-00514R000200020001-3
                                                                                       Approved For Release 2005/07/12
```

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CPLD----M 0-M1110 27-MAR-80 14:43 PAGE 5-2
                                             Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
     115
     116
          000164
                      122711
                                 000114
                                                       5$:
                                                                  CMPB
                                                                             #1L,(R1)
                                                                                                              :LOOP · INDICATOR ·
                                                                                                              :NO, MUST BE UPPER ADDRESS
:SET END ADDR = START ADDR
:HOW TO STOP LOOP
:JUMP TO RTN
                                                                  BHF .
                                                                             6$
     117
          000170
                     001006
          000172
                                 000000G · 000000G
                                                                  MOV
                                                                             MSTRT, MEND
     118
                     016767
     119
          000200
                                                                  CALL
                                                                             HANG
      120 000204
                      000426
                                                                  BR
                                                                             9$
                                                                                                               ; JUMP · TO · RTH.
      121
                                                                  CALL
                                                                             PACK
      122 - 000206
                                                       6$:
                                                                                                               :CONVERT.UPPER.ADDRESS
      123 000212
                      103004
                                                                  BCC-
                                                                             7$
                                                                                                              OK, CONTINUE.
           000214
                                                                                                              ; INVALID NUMERIC
                                                                             ERR5
      125 000220
                      000167 001050
                                                                   JMP -
                                                                             LD2X
                                                                                                              :EXIT
      126
                                                                   \begin{array}{l} {\sf SAVE} \cdot {\sf END} \cdot {\sf ADDRESS} \cdot ({\sf BINARY}) \\ {\sf CHECK} \cdot {\sf FOR} \cdot {\sf LOOP} \cdot {\sf INDICATOR} \cdot {\sf AFTER} \cdot {\sf END} \cdot {\sf ADDRESS} \end{array} \\ ({\sf COND} \ {\sf LTIQN} \cdot {\sf 4}) \\ \end{array} 
      127
      128
      129
                                                                                                              000224
                      016767
                                 000000G 0000000G 7$:
      130
                                                                  MOV.
                                                                             BINUD, MEND
                                                                             FIND
      131
           000232
                                                                  CALL
           000236
                                                                  BCS
                                                                             9$
                                                                                                              :NO.LOOP.
      133
           000240
                      122711
                                 000114
                                                                   СМРВ
                                                                             #*L,(R1)
                                                                                                              :CORRECT INDICATOR
                                                                                                              ;YES, CONTINUE.
;LOOP.OPTION.ERROR
      134
           000244
                      001404
                                                                  REQ.
                                                                             8$
           000246
                                                                             ERR11
                                                                  CALL
      136
          000252
                      000167
                                 001016
                                                                   JMP
                                                                             LD2X
      137
           000256
                                                       8$:
                                                                  CALL
                                                                             HANG
                                                                                                               :HOW-TO-STOP-LOOP
      138
                                                                                                              :POINT.TO.ROUTINE
:JUMP.TO.ROUTINE.
                                                                             RTNPT, R1
                      016701
                                 000000G
                                                       9$:
                                                                  MOV:
      140
          000266
                      000171
                                 000000
                                                                             @(R1)
      141
      142
      143
                                                                  LOAD CONTROL STORE
      144
      145
           000272
                                                       LD2CS::
      146
      147
           000272
                      005046
                                                                  CLR
                                                                             -(SP)
           000274
                                 000002.
                      B12746
                                                                  MOV:
                                                                             #Q$CSET,-(SP)
                                                                                                               ;CP·RESET·
      149
           000300
                                                                  CALL
                                                                             CSR4
                                                                                                              : DO - IT-
      150
           000304
                      012746
                                 000002
                                                                  MOV:
                                                                             #Q$CSET,-(SP)
                                                                                                               :CLEAR · CP · RESET ·
           000310
      151
152
                      005046
                                                                  CLR.
                                                                             -(SP)
                                                                                                               :SET · NOTH ING ·
           000312
                                                                  CALL
                                                                             CSR1
                                                                                                              :SUPPLY-UPPER-MEMORY LIMIT-
:LOWER-LIMIT-
:PREPARE-TO-LOAD-
:NO-ERRORS. CONTINUE
                                                                             CSHIGH,-(SP)
      154
           000316
                      016746
                                 000000G-
                                                                  MOV.
      155
                                                                             CSLOW,-(SP)
BUFS4
           000322
                      016746
                                 000000G
                                                                  MOV:
      156
           000326
                                                                  CALL
                                                                  BCC
      157
           000332
                      103002
                                                                             100$
      158
           000334
                      000167
                                 000734
                                                                   JMP
                                                                             LD2X
                                                                                                              REPEAT PROMPT

NO. ONCE ONLY

READ DATA FROM COMMAND LINE

NOT END OF MEMORY

IF END EXIT

CORN RESPONSE TO PROMPT

LOAD 4 SECTIONS

BUMP LOAD ADDRESS

REPEAT
           000340
                      032767
                                                                  BIT
      160
                                 000000G · 000000G · 100$:
                                                                             #RP,BASE
      161
           000346
                      001416
                                                                   BEQ
          000350
      162
                                                        1$:
                                                                   CALL
                                                                             PDATA-
           000354
                      103002
      163
                                                                   BCC:
                                                                             185
           000356
      164
                      000167
                                 000712
                                                                   JMP
                                                                             LD2X
                                                                  BVC
JMP
      165
           000362
                      102002
                                                        10$:
                                                                             20$
      166
           000364
                      000167
                                 000704
                                                                             LD2X
      167
           000370
                                                                  CALL
                                                                             LOADOS:
      168 000374
                      866767
                                 000000G-000000G
                                                                  ADD
                                                                             INCVAL, MSTR2
      169
          000402
                      000762
                                                                             1$
                                                                                                               : REPEAT.
      170
     17 i
                                             Approved For Release 2005/07/12: CIA-RDF85-00514R000200020001-3
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CPLD----MACRO-M1110 27-MAR-80 14:43 PAGE: 5-3
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
         172
         173 000404
                                                                                           2$:
                                                                                                              CALL.
                                                                                                                               PDATA.
                                                                                                                                                                                      :PROMPT
                 000410
                                    103002
                                                                                                                                30$
                                                                                                                                                                                      : NOT - END - OF - MEMORY -
         175
                 000412
                                    000167
                                                      000656
                                                                                                              .TMP
                                                                                                                               LD2X
                                                                                                                                                                                      :ELSE-EXIT
:NOT-<CR> RESPONSE
        176
177
                 000416
                                    102002
                                                                                           30$:
                                                                                                             BVC.
                                                                                                                                3$
                 000420
                                    000167
                                                      000650
                                                                                                              JMP
                                                                                                                               LD2X
         179
                 000424
                                                                                                                              LOADOS
INCVAL,MSTR2
                                                                                                              CALL
                                                                                                                                                                                     :LOAD 4 SECTIONS
:ADVANCE ADDRESS
:HAS UPPER MEMORY LIMIT BEEN REACHED
                                   066767
026767
101767
         180
                 000430
                                                      000000G 000000G
                                                                                                             ADD:
                 000436
         181
                                                      000000G · 000000G
                                                                                                             CMP
                                                                                                                               MSTR2, MEND
                 000444
                                                                                                             BLOS
                                                                                                                                3$
                                                                                                                                                                                      ;NO, CONTINUE.
         183
                 000446
                                    032767
                                                      000000G-000000G-
                                                                                                             BIT
                                                                                                                                #LOOP,BASE
                                                                                                                                                                                     ;LOOP.ON.?
;YES, CONTINUE.
                                   001002
000167
016767
                 000454
         184
                                                                                                             BNE
                                                                                                                               4$
                 000456
                                                      999612
                                                                                                                               LD2X
                                                                                                                                                                                      ;NO·LOOP, EXIT
         186
                 000462
                                                      000000G-000000G-4$:
                                                                                                             MOV
                                                                                                                               MSTRT, MSTR2
                                                                                                                                                                                      :REINITIALIZE - ADDRESS
         187
                 000470
                                    000755
                                                                                                             BR
                                                                                                                               3$
         188
         190
191
                                                                                                            LOAD DATA MEMORY
                 000472
                                                                                           LD2GD::
         193
                 000472
                                    016746
                                                      ABBBBBB
                                                                                                            MOV-
                                                                                                                              CDHIGH, -(SP)
                                                                                                                                                                                      ;SUPPLY-UPPER-MEMOR型-让M型。
         194
                 000476
                                    016746
                                                      000000G
                                                                                                            MOV-
                                                                                                                               CDLOW,-(SP)
                                                                                                                                                                                      :LOWER·LIMIT·
         195
                 000502
                                                                                                            CALL
                                                                                                                              BUFSET
                                                                                                                                                                                      :PREPARE FOR LOAD
         196
                 000506
                                    103002
                                                                                                            BCC
                                                                                                                               100$
                                   000167
                                                                                                                                                                                      :NO ERROR, CONTINUE
                 000510
                                                      000560
                                                                                                             JMP
                                                                                                                              LD2X
         198
        199
                 000514
                                   005046
                                                                                           1005:
                                                                                                            CLR-
                                                                                                                               -(SP)
                                                                                                                                                                                     :START-MICROCODE-AT-0
        200 000516
                                                                                                            CALL
                                                                                                                              SECOS
        201
        202
                 000522
                                   005046
                                                                                                            GLR -
                                                                                                                                                                                     ; REINHIBIT BRANCH · CONTROL · REGISTER ·
        203
                 000524
                                                                                                            CALL
                                                                                                                              CPCR
        204
        205
                 000530
                                   012746
                                                      000377
                                                                                                            MOV.
                                                                                                                               #377,-(SP)
                                                                                                                                                                                     :SET-MRP-MICRO-ADDRESS-=-X*FF* (JUMP-SELF)
        206
                 000534
                                                                                                            CALL
                                                                                                                              SEQMM-
        207
        208 000540
                                   005046
                                                                                                            GLR.
                                                                                                                               -(SP)
                                                                                                                                                                                     :REINHIBIT BRANCH CONTROL REGISTER
        209
                000542
                                                                                                            CALL
                                                                                                                              MRPCR -
        210
        211
                000546
                                    a12767
                                                      001000 176422
                                                                                                            MOV.
                                                                                                                              #Q$REBK,QR$CR2
                                                                                                                                                                                     :RE-ARM-INTERRUPTS
        212.000554
213 000562
                                                                                                                                                                                     #RETHRM: INTERRUPTS:

#SET-SEARCH:MODE: + ENABLE:INTERRUPTS:

#CLEAR: ALL SELECTIONS:

#CLEAR: DRIVE:AND:PULSE:

#CLEAR:CP:NO-CLOCK:
                                   012767
                                                      120000
                                                                                                            MOV-
                                                                                                                              #<Q$SM+Q$ENOP>,QR$CR2
                                   012746
                                                      000360
                                                                                                            MOV
                                                                                                                              #Q$CSEL,-(SP)
        214 000566
                                   052716
                                                      001001
                                                                                                            BIS
                                                                                                                              #<Q$LBD+Q$LBP>,(SP)
        215 000572
216 000576
                                   052716
                                                                                                            BIS
CLR
                                                                                                                              #Q⊈CHC,(SP)
                                   005046
                                                                                                                               -(SP)
                                                                                                                                                                                      SET HOTHING
        217
                000600
                                                                                                                              CSR1
                                                                                                            CALL
        218
        219 000604
                                   032767
                                                     000000G · 000000G
                                                                                                            BIT
                                                                                                                              #RP,BASE
                                                                                                                                                                                     :REPEAT.PROMPT.?.
        220
                000612
                                   001412
                                                                                                            BEQ.
                                                                                                                              2$
                                                                                                                                                                                      : NO
        221
                000614
                                                                                                            CALL
BCS
                                                                                                                              PDATA
                                                                                                                                                                                     ;READ DATA FROM COMMAND LINE
       222 000620
223 000622
                                   103434
                                                                                                                              LDCDX-
                                   102433
                                                                                                                              LDCDX-
                                                                                                                                                                                     ;<CR>> RESPONSE
        224
                000624
                                                                                                            CALL
                                                                                                                              LOADCD
       225 000630
                                   066767
                                                     000000G - 000000G
                                                                                                            \mathtt{ADD} \cdot
                                                                                                                              INCVAL, MSTR2.
       226 000636
                                  000766
                                                                                                                                                                                                                              MANAGE TO THE PROPERTY OF THE PARTY OF THE P
      227
228
                                                                                                                                                                                                                                                        THE PARTY ME
                                                                                                            PROMPT ONCE THEM FILL MEMORY
```

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Walt Law & Bridge god . Si top 1 8

William St.

0 M1110 27-MAR-80 14:43 PAGE 5-4 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 CPLD - - - M 229 230 000640 2\$: CALL PDATA. :PROMPT 000644 103422 BCS LDCDX-:END.OF.MEMORY. :<CR> RESPONSE. 000646 102421 BVS. LDCDX 233 000650 CALL LOADED :LOAD 1 WORD 000654 066767 000000G · 000000G ADD INCVAL, MSTR2 :ADVANCE - ADDRESS 235 000662 026767 000000G · 000000G CMP MSTR2, MEND :HAS UPPER MEMORY LIMIT BEEN REACHED 236 000670 101767 BLOS 3\$:NO. CONTINUE 237 000672 032767 000000G - 000000G BIT #LOOP,BASE :LOOP . ON . ? 238 000700 001404 BEQ :NO. EXIT: :REINITIALIZE ADDRESS 000702 000710 239 016767 000000G · 000000G MOV MSTRT, MSTR2 240 000757 241 242.000712 243 000714 005046 LDCDX: CLR -(SP):CLEAR NOTHING IN CSR1 012746 176000 MOV. #Q\$MCLK,-(SP) :SET-NO-CLOCKS 000720 244 CALL CSR4 245 000724 005067 176422 CLR QR\$CR2 SET LOAD MODE 246 000730 000167 000340 JMP. LD2X ;EXIT-LOAD 247 248 LOAD HRL BUFFER IN MODULE COBUG 249 250 000734 ĹD2HL:: 251 000734 016746 000000G MOV #SUPPLY-UPPER-MEMORY LIMIT: #SUPPLY-LOWER-MEMORY LIMIT: #VERIFY-CURRENT-RANGE-HLHIGH,-(SP) 252 000740 016746 000000G MOV. HLLOW, - (SP) 253 000744 CALL BUFSM-254 000750 103551 BCS -LD2X : AN - ERROR -255 256 000752 032767 000000G · 000000G #RP,BASE :REPEAT.PROMPT. :NO. FILL.WITH.ONE.VALUE 257 000760 001421 BEO. 3\$ 258 000762 PROMPT FOR DATA: PROMPT FOR DATA: NOTEND OF MEMORY: ERROR OR END OF MEMORY: NOTECR 1\$: CALL PDATA: 259 000766 103002 BCC 2\$ 260 000770 000167 авазав JMP. LD2X 102002 261 000774 BVC. 2\$: 20\$ 262 000776 000167 000272 ĴMĒ ī bāx 263 264 001002 016700 000000G 20\$: MOV. MSTR2,R0 :LOAD MEMORY ADDR (REALLY AN OFESET) 265 001006 000000G · 000000G · 016760 MOV. DATA1,HRL(R0) :LOAD HRL TABLE :BUMP OFFSET 266 001014 066767 000000G 000000G ADD. INCVAL, MSTR2 267 001022 000757 PROMPT FOR NEXT VALUE 269 PROMPT ONCE THEN FILL MEMORY 279 271 001024 3\$: CALL PDATA :PROMPT.FOR.VALUE.:NOT.END.OF.MEMORY. 272 001036 103002 BCC. 4\$ 273 001032 000167 000236 JMP LD2X :ERROR · ON · PROMPT 274 001036 102002 BVC 40\$:NOT. <CR> RESPONSE 275 001040 000167 000230 JMP LD2X 276 001044 016700 имийийи В MOV MSTR2,R0 ;LOAD ADDR (REALLY AN OFFSET) 001050 016760 000000G - 000000G -:MOVE · VALUE · TO · HRL · IN · MEMORY · BUMP · TO · NEXT · ADDRESS MOV DATA1,HRL(R0) 278 001056 066767 000000G · 000000G ADD INCVAL, MSTR2 FINISHED ?: NO. FILL NEXT LOCATION. 97 026767 101761 279 001064 000000G · 000000G CMP MSTR2, MEHD 280 001072 BLOS 4\$ 001074 832767 000000G · 000000G #LOOP, BASE BIT. 282.001102 001474 BEQ :NO. EXIT: :RE-INIT:START:ADDRESS:(OFFSET) LD2X 283 001104 016767 000000G:000000G MSTRT, MSTR2 284 001112 000751

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```
286
287
288
                                                        LOAD BCL BUFFER IN MODULE COPBUG
289 001114
                                              ĹD2BL::
290
    001114
               016746
                         000000G
                                                        MOM
                                                                   BLHIGH, - (SP)
                                                                                                 #SUPPLY-UPPER-MEMORY LIMIT
#SUPPLY-LOWER-MEMORY LIMIT
#YERIFY-CURRENT-RANGE-
291 001120
292 001124
               016746
                         000000G
                                                        MOV-
                                                                   BLLOW, - (SP)
                                                        CALL
                                                                   BUFSM-
293 001130
               103461
                                                        BCS -
                                                                   LD2X
                                                                                                  :AN ERROR
294
295 001132
               832767
                         000000G · 000000G
                                                                   #RP,BASE
                                                                                                 ;REPEAT PROMPT:
;NO. FILL WITH ONE VALUE
     001140
296
               001421
                                                        BEQ.
                                                                   3$
297
     001142
                                              1$:
                                                        CALL
                                                                   PDATA
                                                                                                  :PROMPT · FOR · DATA
298
     001146
                103002
                                                        BCC
                                                                   2$
                                                                                                  : NOT · END · OF · MEMORY.
299 001150
               000167
                                                        JMP
                                                                   LD2X
                                                                                                 :ERROR · OR · END · OF · MEMORY 
:NOT · <CR > RESPONSE ·
300 001154
               102002
                                              2$:
                                                                   20$
30 i
     001156
               000167
                         000112
                                                                   LD2X
302
303
     001162
               016700
                                                        MOM-
                                                                  MSTR2,R0
DATA1,BCL(R0)
                                              20$:
                                                                                                 ;LOAD MEMORY-ADDR -(REALLY AN OFFSET)
304 001166
305 001174
               016760
066767
                         000000G-000000G
                                                        MOV.
                                                                                                 :LOAD BCL TABLE :BUMP OFFSET
                         000000G 000000G
                                                        ADD:
                                                                   INCVAL, MSTR2
306
    001202
               000757
                                                        BR
                                                                                                  : PROMPT FOR NEXT VALUE
307
308
309
                                                        PROMPT ONCE . THEM . FILL . MEMORY.
310
    001204
                                                        CALL
                                              3$:
                                                                   PDATA-
                                                                                                 : PROMPT - FOR - VALUE -
311
    001210
                103002
                                                        BCC
JMP
                                                                   4$
                                                                                                  ; NOT · END · OF · MEMORY
312-001212
313 001216
               000167
                         000056
                                                                   LD2X
                                                                                                 :ERROR.ON.PROMPT.
:NOT.<CR> RESPONSE
               102002
                                              4$:
                                                        BVC
     001220
               000167
                         000050
                                                        .TMP
                                                                   LD2X
315
                                                                                                 :LOAD-ADDR (REALLY-AN-OFFSET)
:MOVE-VALUE-TO-BCL-IN-MEMORY-
316 001224
               016700
016760
                          000000G
                                              40$:
                                                        MOV.
                                                                   MSTR2,R0
     001230
                         000000G 000000G
                                                        MOV.
                                                                   DATA1,BCL(R0)
318
     001236
               066767
                          000000G · 000000G
                                                                                                  ; BUMP · TO · NEXT · ADDRESS
                                                        ADD.
                                                                   INCVAL, MSTR2
319
320
    001244
001252
               026767
                         000000G · 000000G
                                                                   MSTR2, MEND
                                                                                                  :FINISHED:?
               101761
                                                                                                 ;NO; FILL NEXT LOCATION
;REPEAT ?
                                                        BLOS
                                                                   4$
                                                                   #LOOP,BASE
321
     001254
               032767
                         000000G · 000000G
                                                        BIT.
322-001262
323 001264
               001404
                                                        BEQ
                                                                   LD2X
                                                                                                 :NO. EXIT:
:RE-INIT START ADDRESS (OFFSET)
               016767
                         000000G · 000000G
                                                        MOV.
BR
                                                                   MSTRT, MSTR2
324 001272
               000751
                                                                   4$
326
327
     001274
                                              LD2X:
328
    001274
               012746
                         000130
                                                        MOV.
                                                                   #<CSWRTEN+PLD>,-(SP)
                                                                                                  :WRITE · DISABL · SECT · D
329 001300
               005046
                                                        CLR
                                                                   -(SP)
                                                                                                 :SET-NOTHING-
                                                                                                                                           FW.
330 001302
                                                        CALL
                                                                   CSR1
                                                                                                                                          FW.
331 001306
               042767
                         ававаяс ваваяясь
                                                        BIC
                                                                   #RP,BASE
                                                                                                 :CLEAR PROMPT REPEAT FLAG
332.001314
                                                        CALL
                                                                   KILL
                                                                                                 :KILL AST
333 001320
               000167
                         000000G
                                                                   CPXX
```

```
0·M1110 27-MAR-80 14:43 PAGF-6 Release 2005/07/12 IA-RDP85-00514R000200020001-3
CPLD - - - M
     335
     336
337
                                                                   LOAD · CP · CONTROL · STORE ·
     338
     339
     340 001324
                                                        LOADCS:
          001324
     341
                      316746
                                 придриде
                                                                               MSTR2,-(SP)
                                                                   MGV.
                                                                                                                 :SAVE-CURRENT-ADDRESS-IN-STACK
:SEQUENCE-UP-TO-START-ADDRESS-
:SET_WRITE_ENABLE-SECT-A-
     342
          001330
                                                                   CALL
                                                                               SEQUS
     343
          001334
                      012746
                                  000100
                                                                    MOV.
                                                                               #CSWRTEN,-(SP)
     344 001340
                                                                                                                 *WRITE CP CONTROL REG

*SUPPLY SECT A DATA WORD

*SEND IT TO CP - CLOCK SEQUENCER ONLY
                                                                    CALL
                                                                               CPCRA.
     345 001344
                      016746
                                 000000G
                                                                    MOV
                                                                               DATA1,-(SP)
           001350
                                                                    CALL
                                                                               LBCSC
     347
           001354
                                                                               MSTR2,-(SP)
                                                                                                                ;SAVE-CURRENT-ADDRESS-IN-STACK
;SEQUENCE-UP-TO-START-ADDRESS-
;SET-WRITE ENABLE-SECT-B-
;DIRECT-CNTL-WORD-TO-CP-
     348
                      016746
                                 000000G
                                                                   MOV-
     349
           001360
                                                                    CALL
                                                                               SEQUS
           001364
     350
                      012746
                                 000110
                                                                   MOV-
                                                                               #KCSWRTEN+PLB>.-(SP)
     351
           001370
                                                                   CALL
                                                                               CPCRA-
     352 991374
                      016746
                                 000000G
                                                                   MOV.
                                                                                                                 #MOVE DATA WORD TO LOD BUS REG
#SEND DATA TO CP - CLOCK SEQUENCER ONLY
                                                                               DATA2,-(SP)
     353
           001400
                                                                   CALL
                                                                               LBCSC-
     355 001404
                      016746
                                                                   MOV.
                                                                                                                :SAVE-CURRENT-ADDRESS-IN-STACK
:SEQUENCE-UP-TO-START-ADDRESS-
:SET-WRITE ENABLE-SECT-C-
:DIRECT-CNTL-WORD-TO-CP-
                                                                              MSTR2,-(SP)
     356
          001410
                                                                   CALL
                                                                               SEQUS:
           001414
                      012746
                                 000120
                                                                   MOV.
                                                                               #<CSWRTEN+PLC>,~(SP)
     358
          001420
                                                                   CALL
                                                                               CPCRA-
     359
          001424
                      016746
                                 000000G
                                                                                                                 #MOVE DATA WORD TO LOD BUS REG
#SEND DATA TO CP - CLOCK SEQUENCER ONLY
                                                                   MOV
                                                                               DATA3,-(SP)
     360 001430
                                                                   CALL
                                                                               LBCSC -
     361
     362.001434
                      016746
                                 000000G
                                                                                                                :SAYE CURRENT ADDRESS IN STACK
:SEQUENCE UP TO START ADDRESS
:WRITE ENABLE SECTION D
:DIRECT CNTL WORD TO CP
                                                                   MOV.
                                                                               MSTR2,-(SP)
     363 001440
                                                                   CALL
                                                                               SEQUS:
     364
          001444
                      012746
                                 000130
                                                                   NOV.
                                                                               #<CSWRTEN+PLD>,-(SP)
     365
          001450
                                                                   CALL
MCV-
                                                                               CPCRA-
     366
367
          001454
                      016746
                                                                                                                 :MOVE DATA WORD TO LOD BUSTRES
:SEND DATA TO CP - CLOCK SEQUENCER ONLY
                                                                               DATA4.
                                                                                       -(SP)
          001460
                                                                   CALL
                                                                               LBCSC
     368
     369
          001464
                      005046
                                                                   ELR.
                                                                               -(SP)
                                                                                                                 :REINHIBIT BRANCH CONTROL RÈG →
     370 001466
371 001472
                                                                   CALL .
                                                                              CPCR
                      ññ5ñ46
                                                                               -(SP)
                                                                   CLR.
     372 001474
                                                                                                                 :SINGLE · CLOCK · TO · REINHIBIT · BRANCH · REGISTER
     373 001500
                                                                   RETURN -
     374
     375
     376
377
                                                                                                                                                  -43
                                                                   LOAD · CP · DATA MEMORY ·
                                                                                                                                                  7
     379
          001502
                                                        LOADCD:
                                                                              #Q$LDCD.QR$LBR ;MOVE.ATTN CODE.TO.LOD.BUS.REG
#<Q$ATTN+Q$SM+Q$ENOP>.QR$CR2.:SET.ATTN.CODE.READY
QR$CR2.R1 ;READ.CSR2
#Q$ATTN.P1
     380
          001502
                      012767
                                 000003
                                            176424
                                                                   MOV
                      012767
          001510
     381
                                 120100
                                            176422
                                                                   MOV.
     382.001516
                      016701
                                 176422
                                                        1$:
                                                                   MOV:
     383 001522
                      032701
                                 000100
                                                                   BIT.
                                                                              #Q$ATTH,R1
                                                                                                                 :ATTN:CLEAR
                                                                                                                :NO. READ AGAIN :CD MEMORY SWART ADDRESS
     384 001526
                      001373
     385
     386
          001530
                      016767
                                 000000G-176424
                                                                   MOV.
                                                                              MSTR2,QR$LBR
                                                                              #<QscCcP+qsSM+QsENOP>,QRsCR2-;SET-CC-TO-CP
QRsCR2,R1 ;READ CSR2
#QsCCCP,R1 ;IS-CC-TO-CP-CLEAR
     387
          001536
                     012767
                                 120040
176422
                                           176422
                                                                   MOV-
    388
         001544
                     016701
                                                        2$:
                                                                   MOV:
                     032701
    389
         001550
                                 000040
                                                                   BIT.
    390 001554
391
                     001373
                                                                   BNE
                                                                                                                ;NO, READ AGAIN
                                              Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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```
392·001556
393 001564
                012767
012767
                            000001
                                       176424
                                                             MOV
                                                                        #1.QR$LBR
                                                                                                          :TRANSFER · COUNT · = · 1 WORD
                            120040
                                       176422
                                                             MOV
                                                                        #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP
QR$CR2,R1
#Q$CCCP,R1
;IS.CC.TO.CP.CLEAR
394 001572
                016701
                            176422
                                                                                                         ;READ.CSR2
;IS.CC.TO.CP.CLEAR
;NO, READ.AGAIN.
                                                  3$:
                                                             MOV.
395 001576
396 001602
397
                 032701
                            000040
                                                             BIT
                001373
                                                                        3$
398 001604 012767
                            000000G: 176424
                                                                        #DATA1, QR$LBR: ;CC:MEMORY DATA:BUFFER #KQ$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
                                                             MOV
399 001612 012767
400
                            120040 176422
                                                             MOV.
401
                                                             WAIT-FOR-INTERRUPT-FROM-CP-
402
403 001620
404
                                                             WTSE$S + #EFN.3
405 001632
                                                             CLEF$S∙ #EFN.3
406
407
408
                                                             RE-ARM. INTERRUPTS
409 001644
                 012767
                            100400
                                      .176422
                                                             MOV.
                                                                        #<Q$SM+Q$CHB>,QR$CR2
                                                                                                         :CLEAR · INTERRUPT · (USE · HIT · BUFFER · INT)
410 001652
411 001660
412 001666
                 012767
                            101000
                                       176422
                                                                        #<Q$SM+Q$REBK>,QR$CR2 ;RE-ARM
#<Q$SM+Q$ENBK+Q$ENDP>,QR$CR2 ;ENABLE
                 012767
                            160000
                                                             RETURN.
413
414
                000001
                                                             .END
```

```
ALUCKE=-040000
                                        BYTE35= 000043
                                                                              BYTE87=-000127
                                                                                                                     KILL = ********* GX-
LBCP = ******** GX-
LBCSC = ******* GX-
                                                                                                                                                            Q$CPCC=-000010
ALUOE:=:004000
A01 =:010000
BASE:=:******* C;
                                       BYTE36=-000044
BYTE37=-000045
                                                                               BYTE88 = . 000130
                                                                                                                                                            Q$CP2.=.0000260
Q$CSC.=.010000
                                                                              BYTE89= 000131
                                       BYTE38= 000046
                                                                                                                                                     002 Q$CSEL= 000360
002 Q$CSET= 000360
002 Q$CSET= 0000075
002 Q$CSP = 02000075
002 Q$DMA = 000001
                                                                              BYTE9 = 000011
                                                                                                                     LDCDX-
                                                                                                                                  000712R
BCL -
         =·****** GX
                                       BYTE39= 000047
                                                                              BYTE90=-000132
                                                                                                                                  000020RG
äINWD·=·***** GX·
                                       BYTE4 = 000004
                                                                               BYTE91= 000133
                                                                                                                     LD2BL -
                                                                                                                                  001114RG
 BITVAL = . 000000
                                       BYTE40= 000050
BYTE41= 000051
                                                                               BYTE92= 000134
                                                                                                                                  000472RG
000272RG
000734RG
                                                                                                                     LD2CD-
JIT0 = 0000001
BIT1 = 000002
                                                                              BYTE93= 000135
                                                                                                                     LD2CS
                                                                                                                                                      002 · Q$ENBK = · 040000
                                       BYTE42= 000052
                                                                              BYTE94= 000136
                                                                                                                     LD2HL ·
                                                                                                                                                      002.Q$ENOP=.020000
BIT10 = 002000
BIT11 = 004000
                                       BYTE43=-000053
                                                                              BYTE95 = . 000137
                                                                                                                     LD2LN = 000004 G
                                                                                                                                                      0$FAL -- 004000
002 0$FC -- 000045
002 0$FC -- 000044
                                       BYTE44= 000054
BYTE45= 000055
                                                                               BYTE96= 000140
                                                                                                                     LD2TBL.
                                                                                                                                  000000RG
 BIT12---010000
                                                                               BYTE97 = . 000141
                                                                                                                     LD2X-
                                                                                                                                  001274R
 BIT13 = 020000
BIT14 = 040000
BIT15 = 100000
                                       BYTE46= 000056
                                                                              BYTE98= 000142
BYTE99= 000143
                                                                                                                     LOADCD.
                                                                                                                                  001502R
                                                                                                                                                           .Q$FP =.000046
.Q$HBF.=.000002
                                                                                                                                                     002:0$FP
                                        BYTE47 = 000057
                                                                                                                     LOADCS 001324R
                                                                                                                                                      002
                                       BYTE48= 000060
BYTE49= 000061
BYTE5 = 000005
                                                                              BYTVAL = . 000144
                                                                                                                     LOC.EN= 000100
                                                                                                                                                            Q$ICP -- 000006
 BIT2 = 000004
BIT3 = 000010
BIT4 = 000020
                                                                               CBKALL = 001000
                                                                                                                     LOC:WA=:04000
LOC:WB=:100000
LOOP:=:******** GX:
MAREN1=:000001
MAREN2=:004000
                                                                                                                                                            Q$IHB = 000003
Q$IHRL= 000002
Q$IMRP= 000007
                                                                              CBKCLK= 000400
CDHIGH= ******* GX-
CDLOW = ******* GX-
                                       BYTE50 - 000062
 BIT5
          = 000040
                                       BYTE51= 000063
BYTE52= 000064
                                                                                                                                                            Q$LBD - - 001000
          = 000100
                                                                              CHOBRE = 100000
                                                                                                                                                            Q$LBDP=-001001
Q$LBP-=-000001
Q$LDCD=-000003
          = 000200
                                       BYTE53= 000065
 BIT7
                                                                              CPCCEN = · 010000
CPCR · = · ******* GX · CPCRA · = · ******* GX ·
                                                                                                                     MARLOD= 010000
          = 000400
 BITE
                                       BYTE54= 000066
BYTE55= 000067
                                                                                                                     MAROUT=-000002
          = 001000
                                                                                                                     MAR.LO= 002000
MAR.OU= 000040
                                                                                                                                                            Q$LDMD= 000004
 BLHIGH= · ******* GX
                                       BYTE56 = . 000070
                                                                              CPREAD = 040000
CPWRTE = 020000
CPXX = ****** GX
                                                                                                                                                            Q$LDPP=-002000
Q$LHP-=-010000
Q$MNC-=-140000
BLLOW = · ***** G% ·
                                       BYTE57 = . 000071
                                                                                                                     MBKALL=-001000
MBKCLK=-000400
MEND---********** GX-
 BUFSET= ****** GX
                                       BYTE58=-000072-
BYTE59=-000073
BYTE6 =-000006
 BUFSM-=-******** GX
                                                                              CSADRD= 000004
                                                                                                                                                            Q$MR = 000052
Q$MRP = 000040
BUFS4 = ******** GX
                                                                              CSEQCI=-100000
                                                                                                                     MMADRD= 000100
BYTE0 = 000000
BYTE1 = 000001
                                                                              CSHIGH= ******** GX-
CSLOW = ******* GX-
CSOE = **00040
CSR1 = ****** GX-
                                       BYTE60= 000074
                                                                                                                     MMLEFT= 000002
MMOE = 000004
MMURTE= 000010
                                                                                                                                                            Q$MRP2=:000040
Q$MSC:=:040000
                                       BYTE61= 000075
BYTE62= 000076
 BYTE10= 000012
                                                                                                                                                            Q$MSET= 000004
Q$MSP = 100000
 BYTE11=-000013
                                       BYTE63= 000077
                                                                                                                     MNOBRE = 100000
BYTE12=-000014
BYTE13=-000015
BYTE14=-000016
                                                                                                                    MREN1 = 00000
MREN1 = 00001
MREN2 = 020000
MRPCR = ******* GX
MSTRT = ******** GX
                                       BYTE64= 000100
                                                                              CSWRTE=-000100
DATA1 = ********* GX-
DATA2 = ********* GX-
                                                                                                                                                            Q$NCLK + 176000
Q$PP = 000100
                                       BYTE65= 000101
                                       BYTE66=-000102
BYTE67=-000103
                                                                                                                                                           Q$PP = 000100
Q$PPSW= 000320
Q$PP2 = 000300
Q$OHLT= 000013
Q$QL = 000043
BYTE15= 000017
BYTE16= 000020
BYTE17= 000021
                                                                              DATA3 = ******** GX-
DATA4 = ******** GX-
                                       BYTE68= 000104
                                                                                                                     MSTR2 - ****** GX-
                                       BYTE69= 000105
BYTE7 = 000007
                                                                              DBR.RD= 000001
                                                                                                                     MSYN - 000040
N - 000144
 BYTE18= 000022
                                                                              DB$CPP= 00001
DB$CPP= 001457
DB$SPT= 000026
DB$TPC= 000023
DISPGS= 100000
                                                                                                                                                            Q$QLA -= 000053
BYTE19= 000023
BYTE2 = 000002
                                       BYTE70= 000106
                                                                                                                     PACK -
                                                                                                                              = · ***** GX ·
                                                                                                                                                            Q$QLB·=·000054
Q$QLR·=·000001
Q$QW =·000042
                                       BYTE71=-000107
BYTE72=-000110
BYTE73=-000111
                                                                                                                     BYTE20 = . 000024
BYTE21 = 000025
                                                                              DMAAWR= 000005
BYTE22= 000026
BYTE23= 000027
                                                                                                                                                            Q$RDCD=-000005
                                       BYTE74= 000112
                                                                              DMARRD = . 000003
                                                                                                                     PLD.
                                                                                                                             = . 000030
                                                                                                                                                           Q$RDMD= 000006
Q$REBK= 001000
Q$RNC = 006000
Q$RSC = 004000
                                                                              DMARWR = . 000004
                                       BYTE75= 000113
                                                                                                                     PLRWR - - 000200
BYTE24= 000030
                                                                              EFN.3 = ******** GX-
ENBR = 010000
                                       BYTE76= 000114
BYTE77= 000115
                                                                                                                    PLR.EN=.000200
QR$CR1=.176420
BYTE25= 000031
3YTE26= 000032
BYTE27= 000033
                                                                              ERR11 = ********* GX*
ERR4 = ******** GX*
ERR5 = ********* GX*
                                       BYTE78= 000116
                                                                                                                     QR$CR2= 176422
                                                                                                                                                            Q$RSET= 000010
                                                                                                                    QR$LBR=-176424
QR$LBR=-176424
Q$ATTN=-000100
Q$BCL-=-000001
                                                                                                                                                           U$RSE|= 000010

Q$SM = 100000

Q$SP = 000120

Q$SP2 = 000340

RGQ_EN= 0002000
                                       BYTE79= 000117
BYTE28= 000034
                                       BYTE8 = 000010
BYTE29= 0000035
BYTE3 = 000003
                                       BYTE80= 000120
                                                                              ERR7 = ********* GX*
FIND = ********** GX*
                                       BYTE81= 000121
BYTE30= 000036
                                       BYTE82= 000122
                                                                                       = ****** GX
                                                                                                                     Q$CHB - 999499
BYTE31 = 000037
BYTE32 = 000040
BYTE33 = 000041
                                       BYTE83 = . 000123
                                                                              HLHIGH= ****** GX-
HLLOW = ****** GX-
                                                                                                                     Q$CHRL= .000200
                                                                                                                                                                     ⇒ жжжжжжж GX
                                                                                                                                                            RP -
                                       BYTE84= 000124
                                                     RTNPT = ****** GX
                                       BYTE85=:000125
                                                                                                                                                                     =-жжжжжжж GX
BYTE34= 000042
                                       BYTE86=-000126
                                                                                                                                                            SEQCS = ********** GX
```

```
CPLD--- MACRO M1110 27-MAR-80 14:43 PAGE_6-3
SYMBOL TABLE
                                               Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SEDMM- = · ***** GX ·
                                  T$FSAA=:000000
                                                                    WORD12=-000030
                                                                                                      WORD42= 000124
                                                                                                                                        WORD72= 000220
WORD73= 000222
SEQ:CI=-000010
S$CLR-=-000000
                                  T$FSAB=:000004
                                                                    WORD13= 000032
                                                                                                      WORD43=-000126
                                  T$FSAC= 0000014
                                                                    WORD14= 000034
                                                                                                      WORD44= 000130
WORD45= 000132
                                                                                                                                        WORD74= 000224
S$LA - 000001
                                  T$FSB2=-000010
                                                                    WORD15= 000036
                                                                                                                                        WORD75=-000226
WORD76=-000230
WORD77=-000232
                                                                    WORD16= 000040
WORD17= 000042
WORD18= 000044
S$08 - - 000005
                                  T$IB· = 000026
                                                                                                      WORD46= 000134
                                  T$IBAR= 000024
S$QR · = · 000006
                                                                                                      WORD47= 000136
        = 0000004
                                  T$IBE - - 020000
                                                                                                      WORD48 = . 000140
                                                                                                                                        WORD78= 000234
                                                                                                      WORD49= 000142
WORD5 = 000012
S$SR -
        = . 000007
                                  T$IBF - = - 040000
                                                                    WORD19= 000046
                                                                                                                                        WORD79= 000236
WORD8 = 000020
       = 000010
                                  T$ICD·=-000040
T$MODE=-004000
93591
                                                                    WORD2 - = - 000004
       = 000014
S$S2-
                                                                    WORD20= 000050
WORD21= 000052
                                                                                                      WORD50=-000144
WORD51=-000146
WORD52=-000150
                                                                                                                                        WORD80= 000240
                                  T$0B: = 000036
T$0BE: = 004000
T$0BF: = 010000
TD$CTR= 176370
                                                                                                                                        WORD81 = 000242
TD$CTW= 176360
TD$INL= 004000
                                                                    WORD22= 000054
                                                                                                                                        UORD82= 000244
                                                                    WORD23= 000056
WORD24= 000060
                                                                                                      WORD53=.000152
                                                                                                                                        WORD83= 000246
TD$MEM= · 000270
                                  T$0BRA= 000034
                                                                                                      WORD54= 000154
                                                                                                                                        WORD84= 000250
TD$0AR= 176344
TD$0TR= 176346
                                  T$0BWA=-000032
                                                                    WORD25 = 000062
                                                                                                      WORD55=-000156
                                                                                                                                        WORD85= 000252
WORD86= 000254
                                                                                                      WORD55=-000150
WORD56=-000160
WORD57=-000162
WORD58=-000164
                                  T$0UTA= · 100000
T$RBD0= · 000200
                                                                    WORD26= 000064
WORD27= 000066
TD$QRD= 000274
                                                                                                                                        WORD87= 000256
TD$SW· = · 176376
TD$TAR= · 176372
                                  T$RNB·=-000040
                                                                    WORD28 = 0000070
                                                                                                                                        WORD88= 000250
WORD89= 000262
WORD9 = 000022
                                  T$RSET=:040000
                                                                    WORD29 = 0000072
                                                                                                      WORD59 = . 000166
TD$TAW= · 176362
                                  T$SC: =:000022
T$SCLK=:020000
                                                                    WORD3 = 0000006
                                                                                                      WORD6 = 000014
TD$TDR= 176374
                                                                    WORD30=-000074
                                                                                                      WORD60= 000170
WORD61= 000172
                                                                                                                                        WORD90= 000264
WORD91= 000266
TD$TDW=-176364
                                  T$SEG1=:000000
                                                                    WORD31= 000076
T$AD - - 000020
T$BA - - 000002
                                  T$SEG2= 000001
                                                                    WORD32= 000100
                                                                                                      WORD62= 000174
                                                                                                                                        WORD92= 000270
                                  T$SEG3=-000002
T$SO- =-000001
                                                                    WORD33= 000102
WORD34= 000104
                                                                                                      WORD63=-000176
                                                                                                                                        WORD93= 000272
T$BD· = 000010
                                                                                                      WORD64- 000200
WORD65- 000202
                                                                                                                                        WORD94= 000274
                                  T$UBUS= 100000
T$BS0 - = 100000
T$BT - = 000020
                                                                    WORD35= 000106
                                                                                                                                        WORD95 = 000276
                                                                    WORD33--000100
WORD36--000110
WORD37--000112
                                  T$1CLK=-000400
T$8BEN=-000020
                                                                                                      WORD66= 000204
                                                                                                                                        WORD96 = . 000300:
T$BTAR= 000030
                                                                                                      WORD67=-000206
                                                                                                                                        WORD97 = 000302*
T$BTD - = - 002000
T$CD - = - 000100
                                  UBD. IN= 000020
                                                                    WORD38= 000114
                                                                                                      WORD68= 000210
                                                                                                                                        WORD98=-000304
                                  WORD0 = 000000
WORD1 = 000002
                                                                    WCRD39= 000116
                                                                                                      WORD69=-000212
WORD7 =-000016
                                                                                                                                        WORD99=.000306
T$CLK - - 002000
                                                                    WORD4 = 000010
                                                                                                                                        URDVAL = ∙ 000310
T$DISK=-000200
                                                                                                      WORD70=.000214
WORD71=.000216
                                  WORD10= 0000024
                                                                    WORD40=-000120
                                                                                                                                        XTREAD= 001000
T$DRD - = - 000004
                                  WORD11=-000026
                                                                    WORD41=-000122
                                                                                                                                        XTWRTE = . 000400
T$EMEM= · 010000
 . ABS.
           ававава
                           000
           имимия
                           001
                           002
CPLD
           001670
ERRORS · DETECTED:
                         0
VIRTUAL-MEMORY-USED: 3677 WORDS- (-15 PAGES)
DYNAMIC-MEMORY: 4916 WORDS- (-18 PAGES)
ELAPSED TIME: 00:00:51
CPLD, GPLD/-SP=[20,1]IM, [20,1]CPLD.
```

```
MACRO MI110 27-MAR-80 14:44 PAGE 5
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
CPPR-
                                                                     .#ITLE-GRPR-
.PSECT-CPPR-
        23456789
           000000
                                                                     MARDWARE QUERY RESOLVER MANUAL DEBUGGING AIDS CONTROL PROCESSOR TEST ROUTINES.
                                                                                  PROTOTYPE VERSION
                                                                     COMMANDS:
                                                                                PRINT-CP-MEMORY-CONTENTS
       11
                                                                     ONCE - A - COMMAND - HAS - BEEN - EXECUTED (OR - AN - ERROR - ENCOUNTERED) THIS - MODULE - RETURNS - CONTROL - TO - THE - MODULE - CP - AT - LOCATION -
       14
15
16
17
                                                                      'CPXX'.
                                                            18
19
20
21
22
23
24
25
27
28
29
                                                                     NOTE:
                                                                     THE COMMAND TO PRINT CP DATA MEMORY CANNOT BE USED UNLESS MRP MICROPROGRAM MEMORY AND CP CONTROL STORE HAVE BEEN LOADED VIA THE LOADER PROGRAM.
                                                             *****
                                                                     .MCALL: WTSE$S.CLEF$S.
       30
31
32
33
34
                                                                     TABLE OF VALID OF MEMORY MNEMONICS AND ADDRESSES OF ASSOCIATED
                                                                     ROUTINES
           000000
                                                         PR2TBL::
           000000
                                                                      .ASCII
                                       123
                                                                                 /CS/
                                                                                                                    ;PRINT-MICROPGM-MEMORY
       35
36
           000002
000004
                       0003125
103
                                                                      .WORD
                                                                                PR2CS
                                       104
                                                                      .ASCII.
                                                                                 /CD/
                                                                                                                   ; PRINT DATA MEMORY
       37
                       0006323
                                                                                PR2CD.
<.-PR2TBL>/4
           000006
                                                                      .WORD
       38
39
                       000002
                                                         PR2LH-
       40
                                                                     PRINT-BUFFER
       41
       42
           000010
                                                          PB2TBL::
           000010
000012
000014
                                                                                                                   PRINT HIT BUFFER
       43
44
                           110
                                       102
                                                                      .ASCII
                                                                                 /HB/
                       001314
                                                                      .WORD
       45
                           110
                                       114
                                                                      .ASCII
                                                                                 /HL/
                                                                                                                   PRINT HRL
       46
           000016
                       001406
                                                                      .WORD
                                                                                 PB2HL
       47
           000020
                           102
                                                                     .ASCII.
                                                                                                                    PRINT BCL
                                                                                 ZBLZ
       48
           000022
                       0015001
                                                                      .WORD
                                                                                 PB2BL
      49
50
51
52
53
54
55
56
57
                       000003
                                                         PB2LN
                                                                                 <.-PB2TBL>/4
                                                                    PRINT:
PERFORM: THIRD: LEVEL: PARSING-
EG. IN: THE: COMMAND:
PR>PR: CD: 0
PROPER THE: 'CD:
                                               Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
```

```
year o orga
          0 M1110 27-MAR-80 14:44 PAGE 5-1
                                           Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
  59
      000024
                                                      PR2::
  60
      000024
000030
                                                                 CALL
                                                                              FIND
                                                                                                                 ; LOCATE: MEMORY: MNEMONIC: IN: COMMAND: LINE:
  61
                  103004
                                                                  BCC
                                                                              1$
                                                                                                                 OK, CONTINUE:
      000032
                                                                  CALL
                                                                              ERR4
  63
      000036
                  000167
                              001164
                                                                  JMP .
                                                                              PR2X
                                                                                                                 :EXIT
  64
  65
      000042
                  012700
                              000002
                                                                  MOV-
                                                                              #PR2LN,R0
                                                                                                                 :NUMBER OF TABLE ENTRIES :POINT TO TABLE
  66
      000046
                  012702
                              000000
                                                                  MOV.
                                                                              #PR2TBL,R2
  67
      000052
                                                                  CALL
                                                                              SCAN
                                                                                                                 : MATCH AGAINST COMMAND LINE
  68
      000056
                  103004
                                                                 BCC.
                                                                              2$
                                                                                                                 : MATCH WAS MADE
  69
      000060
                                                                             ERR7
                                                                  CALL
                                                                                                             : INVALID MEMORY MNEMONIC:
  70
71
                  000167 001136
      000064
                                                                             PR2X
                                                                 SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC. SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
  72
  73
74
75
76
77
                                                                     START-ADDRESS-ONLY, PRINT-ONE MEMORY-LOCATION, CP>PR·CD-0 START-ADDRESS, LOOP INDICATOR, LOOP-ON-THE-READING-OF-THIS-ONE-MEMORY-LOCATION-ONLY, PRINT-THE-CONTENTS ONLY-
                                                                      ONCE.
                                                                      GP>LD-CD-0 L-
  81
                                                                      START ADDRESS, END ADDRESS, NO LOOP, PRINT THE CONTENTS OF MEMORY BETWEEN THE START AND END ADDRESSES.
  82
  83
                                                                     OF MEMORY BETWEEN THE STAKT HAVE ENVIRONMENTS:

(CP>PR CD 0 7

START ADDRESS, END ADDRESS, LOOP INDICATOR: READ THE CONTENTS

OF MEMORY BETWEEN THE START AND END ADDRESSES, HOWEVER, PRINT-
ONLY THE CONTENTS OF MEMORY AT THE START ADDRESS.

(CP>PR CD 0 7 L
  85
  86
  88
  89
  90
      000070
                  010167
                             ABBBBBBB
                                                      2$:
                                                                 MOV.
                                                                             R1.RTHPT
                                                                                                                 :SAVE POINTER
:LOCATE NON-BLANK IN COMMAND LINE
:OK, CONTINUE
 91
92
      000074
                                                                 CALL
                                                                             FIND
      000100
                  103004
                                                                 BCC -
                                                                             34
  93
      000102
                                                                 CALL
                                                                             ERR4
                                                                                                                 ; 'MISSING OPERAND:
  94
      000106
                  000167
                              001114
                                                                  JMP -
                                                                             PR2X
                                                                                                                 :EXIT:
  95
      000112
                                                                                                                 CONVERT COMMAND LINE VALUE TO BINARY CONVERSION SUCCESSFUL TO
                                                     3$:
                                                                 CALL
                                                                             PACK
  96
      000116
                  103004
                                                                 BCC.
                                                                             4$
      000120
                                                                 CALL
                                                                             ERR5
                                                                                                                 : "INVALID NUMERIC VALUE
  98
      000124
                  000167
                             001076
                                                                 JMP.
 99
100
     000130
                  016767
                              000000G 000000G 4$:
                                                                             BINWD, MSTRT
BINWD, MSTR2
                                                                 MOV.
                                                                                                                 :SAVE PRINT START ADDRESS
      000136
 101
                  016767
                             000000G 000000G
                                                                 MOV.
                                                                                                                 :SAVE · IT · TWICE ·
:INIT · END · ADDRESS
102.000144
                  012767
                              1777777
                                         BBBBBBBB.
                                                                 MOV-
                                                                             #-1.MEND
103
                                                                 START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE). IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
104
105
106
107
108 000152
                                                                                                                SCAN COMMAND LINE
SOMETHING THERE
SET END ADDR - STAR ADDR
JUMP TO RTN
                                                                             FIND
                                                                 CALL:
109 000156
                  103004
                                                                 BCC -
                  016767
110 000160
                             000000G:000000G
                                                                 MOV:
                                                                             MSTRT, MEND
111
     000166
                 000445
                                                                 BR
                                                                              9$
112
113 000170
                 122711
                             000114
                                                                 CMPB
                                                                             #fL,(R1)
                                                                                                                 :LOOP · INDICATOR
114 000174
                 001011
                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                                                                 :NO. MUST BE UPPER ADDRESS
```

CPPR.

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MACRO M: 110 27-MAR-80 14:44 PAGE 5-2. Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
CPPR-
                                                                                                                                                                                            #SET-FLAG-FOR-OUTPUT CONTROL:
#SET-END-ADDR: = START-ADDR:
         115 000176
                                     052767
                                                        000000G · 000000G
                                                                                                                                    #OUT,BASE
         116 000204
                                     016767
                                                        000000G · 000000G
                                                                                                                 MOV:
                                                                                                                                    MSTRT, MEND.
         117 000212
                                                                                                                 CALL
                                                                                                                                   HANG
          118 000216
                                     000431
                                                                                                                                                                                             :JUMP·TO·RTN·
         119
          120
                   000220
                                                                                                                                                                                            CONVERT-UPPER-ADDRÉSS....
                                                                                              6$:
                                                                                                                 CALL
                                                                                                                                   PACK
         121 000224
122 000226
                 000224
                                      103004
                                                                                                                 BCC.
                                                                                                                                    7$
                                                                                                                                                                                            OK, CONTINUE
                                                                                                                                                                                             : INVALID NUMERIC
                                                                                                                                    ERR5
                  000232
                                     000167
                                                       000770
                                                                                                                                                                                            :EXIT-
         124
125
                                                                                                                 SAVE END ADDRESS (BINARY)
CHECK FOR LOOP INDICATOR AFTER END ADDRESS (CONDITION 4)
                                                                                                                                                                                           :SET-UP-END ADDRESS::CHECK-FOR LOOP-INDICATOR:NO-LOOP-
          128 - 000236
                                     016767
                                                       000000G 000000G 7$:
                                                                                                                                   BINWD, MEND.
                   000244
                                                                                                                 CALL
                                                                                                                                    FIND
                   000250
                                                                                                                                   9$
#*L<sub>*</sub>(R1)
                                                                                                                 BCS.
                  000252
000256
          131
                                      122711
                                                        000114
                                                                                                                 CMPB
                                                                                                                                                                                            CORRECT LOOP INDICATOR
                                     001404
                                                                                                                 BEQ.
                                                                                                                                                                                            ;YES:
                   000260
                                                                                                                 CALL
                                                                                                                                   ERR11
          134
                  000264
                                      000167
                                                        000736
                                                                                                                 JMP .
                                                                                                                                   PR2X
          135
                                     052767
                                                                                                                                   #OUT,BASE
                  000270
                                                        000000G · 000000G · 8$:
                                                                                                                 BIS.
                                                                                                                                                                                            :SET-OUTPUT-CONTROL-
          136
                  000276
                                                                                                                                                                                            :HOW-TO-STOP-LOOP-
          138 000302.
139 000306
                                     016701
                                                        000000G
                                                                                                                 MOV.
                                                                                                                                   RTHPT,R1
                                                                                                                                                                                           :POINT.TO.ROUTINE:
:JUMP.TO.ROUTINE:
                                     000171
                                                        000000
                                                                                                                                   @(R1)
          140
          141
          142
                                                                                                                 PRINT FROM CONTROL STORE
          143
          144
                 000312
000312
          145
          146
                                     005046
                                                                                                                 CLR.
                                                                                                                                   -(SP)
                                                                                                                                                                                           :CLEAR·NOTHING:
:CP·RESET:
:DO:IT:
          147
                  000314
                                     012746
                                                        000002 :
                                                                                                                 MOV.
                                                                                                                                   #Q$CSET,-(SP)
                   000320
                                                                                                                 CALL
                                                                                                                                   CSR1
          149
                  000324
                                     012746
                                                        000002
                                                                                                                                   #Q$CSET,-(SP)
-(SP)
                                                                                                                MOV.
                                                                                                                                                                                            :CLEAR · CP · RESET ·
          150
                  000330
                                     005046
                                                                                                                 CLR.
                                                                                                                                                                                            :SET · NOTHING ·
          151
                  000332
                                                                                                                 CALL
          152
          153
                  000336
                                     016746
                                                        000000G
                                                                                                                 MOV.
                                                                                                                                                                                           ;SUPPLY-UPPER-MEMORY LIMIT-
                                                                                                                                   CSHIGH,-(SP)
         154 000342
                                                                                                                 MOV.
                                                                                                                                   CSLOW,-(SP)
                                                                                                                                                                                            :LOWER · LIMIT ·
          155
                 000346
000352
                                                                                                                 CALL.
                                                                                                                                   BUFS4
                                                                                                                                                                                            :PREPARE.FOR.LOAD.
                                     103002
000167
          156
                                                                                                                BCC:
                                                                                                                                                                                            :NO · ERROR ·
                  000354
                                                        000646
                                                                                                                 JIMP.
                                                                                                                                   PR2X
         158
                 000360
                                                                                                                                                                                           #SEND CURRENT ADDRESS #SEQUENCE UP TO PRINT START ADDRESS #SELECT CNTL STORE SECT A #SET CP CNTL REG
         159
                                     316746
                                                        000000G
                                                                                                                 MOV-
                                                                                                                                   MSTR2,-(SP)
                  000364
         160
                                                                                                                 CALL
                  000370
                                     012746
                                                        000040
                                                                                                                                   #CSOE,-(SP)
CPCR
                                                                                                                MOV
         162
                 000374
                                                                                                                 CALL
         163
                 000400
                                     005046
                                                                                                                                    -(SP)
         164
                 000402
                                                                                                                                                                                           #CLOCK - TO - RESET - BR - REG - FF - #REQUEST - CP - TO - LOD - BUS - #SAVE - FOR - PRINTING -
                                                                                                                 CALL
                                                                                                                                   LBCP
                  000406
                                                                                                                CALL
                                                                                                                                   CPLB
         166
                 000412 012667
                                                        000000G
                                                                                                                MOV.
                                                                                                                                   (SP)+,DATA1
         167
         168 000416 016746
                                                        000000G
                                                                                                                MOV-
                                                                                                                                   MSTR2,-(SP)
                                                                                                                                                                                   SEND CURRENT ADDRESS
         169
                 000422
                                                                                                                                   SECCS
#KCSOE+PLB>,-(SP)
                                                                                                                CALL
                                                                             MOV #(CSOE+PLB),-(SP) SELECT: CNTL: STORE: STORE: SELECT: CNTL: STORE: STORE: SELECT: CNTL: STORE: SELECT: SLICET: STORE: SELECT: SLICET: STORE: SELECT: SLICET: STORE: SLICET: STORE: SELECT: SLICET: STORE: SLICET: STORE: SLICET: SLICET: STORE: SLICET: SLICET
         170 000426
                                    012746
                                                       000050
                 000432
```

1.0	11110 27	T-MAK-80 14:44 PAGE 5- Approved For	Release 2	2005/07/1 S IA-RDP85-0	0514R000200020001-3
172-000436	005046		GLR.	-(SP)	
173 000440			CALL:	LBCP	:CLOCK:TO:REINHIBIT:BR:
174 000444			CALL.	CPLB	REQUEST CP. TO LOD BUS.
175 000450	012667		MOV.	(SP)+.DATA2	#CLOCK
176	016746	,			The second secon
177 000454 178 000460	016746	0000006.	MOV.	MSTR2,-(SP)	:SEND CURRENT ADDRESS :SEQUENCE UP TO PRINT START ADDRESS :SELECT CNTL STORE SECT C :SET CP CNTL REG
179 000464	010746	GGGGGG	CALL	SEQCS:	:SEQUENCE · UP · TO · PRINT · START · ADDRESS ·
180 000470	012140	000000	MOV. CALL.	#KUSUE+PLC>,-(SP)	:SELECT-CNTL-STORE-SECT-C-
181 000474	005046		CLR.	-(SP)	;SET-CP-CNTL-REG-
182 000476			CALL	100	;CLOCK·TO·REINHIBIT·BR· ;REQUEST·CP·TO·LOD·BUS· ;SAVE·FOR·PRINTING·
183 000502			CALL	CPL B	CLUCK TO REINHIBIT BR
184 000506	012667	000000G·	MOV.	(SP)+.DATA3	*KEWUESI:UF:10:LUU:BUS: •SAVE.EAD.DDINTING
185		;			* OHAC TOK TEKTHITING
186 000512	016746	000000G ·	MOV.	MSTR2,-(SP)	:SEND-CHRRENT-ADDRESS.
187 000516	010775	000000	CALL.	SEQCS.	:SEQUENCE UP TO PRINT START ADDRESS.
188 000522 189 000526	012746	ดดดดงค	MO√·	# <csoe+pld>(SP)</csoe+pld>	:SELECT CHTL STORE SECT D
190 000532	agsaac		CALL.	CPCR	:SET-CP-CNTL-REG-
191 000534	99JU40		CLR CALL	-(SP)	
192 - 999549			CALL:	LDUT CDID	SEND CURRENT ADDRESS SEQUENCE UP TO PRINT START ADDRESS SELECT CNTL STORE SECT D SELECT CHIL STORE SECT D SELECT CHIL STORE SECT D SELECT CHIL SECT SECT SECT SECT SECT SECT SECT SECT
193 000544	012667	000000G	MOV.	CEED (SP)+ DOTOM	REQUESTOPOTO LODOBUS
194 000550	005046		CLR.	-(SP)	*CLEOD CD CONTROL DEC
195 000552.			CALL.	CPCR	ACCEUM.CL.COLLINGE.KEG.
196		;			
197 000556	405000		EALL:	PRDATA 100\$ PR2X	PRINT MEMORY CONTENTS NOT END OF MEMORY END OF MEMORY
120 0002624	103002	000475	BCC.	100\$:NOT-END-OF-MEMORY
700	000101	000436 ;	JMP.	PR2X	;END-OF-MEMORY-
200 201 000570	966767	000000G 000000G 100\$:	ADD.	THOUGH NOTES	: ADVANCE · ADDRESS ·
202 000576	026767	000000G 000000G 1001.	CMP -	INCVHENDIRZ:	: ADVANCE : ADDRESS
203 000604	101665		BLOS	1 10 1 KZ x NEMD :	HAS UPPER MEMURY LIMIT BEEN REACHED.
204 000606	032767	000000G · 000000G ·	BIT.	#I NOP. BASE.	INUA CUNTINUE
205 000614	001002		BHE.	2005	* PAGE CURTINAL TO THE TOTAL TOTAL TO THE TO
206 000616	000167	000404	TMD	PR2X	:NO. FXIT.
207 000622	016767	000000G 000000G 200\$:	MOV.	MSTRT, MSTR2	:INIT START ADDRESS
208 000630	000653		BR	1\$; AND REPEAT PRINT
209 210					
211			00107	EDOM DOTA MEMORIA	s o v ster s
212.			LKIHI.	FROM·DATA·MEMORY	
212. 213 000632.		PR2GD	::		The second secon
214 000632.	016746	000000G	MOV.	CDHIGH(SP)	:SUPPLY MEMORY UPPER LIMIT: :LOWER LIMIT: :PREPARE FOR LOAD
215 000636	016746	000000G	MOV.	CDLOW, - (SP)	*JOHER HIMIT.
216 000642		the second of th	CALL	BUFSET	:PREPARE FOR LOAD
217 000646	103002		BCC -	1004	OK, CONTINUE
218 000650 219	000167		JMP.	PR2X	
219 220 000654	005040	,	0.0		
220 000654 221 000656	000046	100\$:	CLR CALL	-(SP)	;START·MICROCODE·AT·0
222.			CHLL.	SEQCS:	
223 000662-	305046	•	GLR.	-(SP)	*DEINUIDIT DDANCU CONTROL DES
224 000664			CALL.	CPČR´	*KETHUTOTI DKHMCH FANIKAT KER
225 000670	005046		CLR:	-(SP)	
226 000672			CALL:	LBCP	SINGLE · CLOCK · TO · REINHIBIT · BRANCH · PECT
12r 000676 12a aaazaa	012746	000377	MOV.	#377,-(SP)	REINHIBIT BRANCH CONTROL REG
540 BBBCB3.			CALL:	SEQMM.	(00111 0

```
MACRO M1110 27-MAR-80 14:44 PAGE 5-4
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229
230
    000706
                                                          GLR
                                                                     -(SP)
               005046
                                                                                                    :REINHIBIT BRANCH CONTROL REG
23 i
232
    000710
000714
                                                          CALL
                                                                    MRPCR
                                                          CLR.
               005046
                                                                     -(SP)
233
    000716
                                                          CALL
                                                                                                   :SINGLE CLOCK TO REINHIBIT BRANCH REGISTER:
:RE-ARM INTERRUPTS
:SET SEARCH MODE + ENABLE INTERRUPTS
                                                                    LBMRP
234 000722
               012767
                          001000
                                    176422
                                                          MOV
                                                                    #Q$REBK,QR$CR2
235
    000730
               012767
012746
                          120000
000360
                                    176422
                                                          MOV
                                                                    #<Q$SM+Q$ENOP>,QR$CR2
                                                                                                   CLEAR ALL SELECTIONS CLEAR OR IVE AND PULSE CLEAR OR IVE AND PULSE CLEAR OF NOTCLOCK SET NOTHING
    000736
236
                                                          MOV
                                                                    #Q$CSEL,-(SP)
#<Q$LBD+Q$LBP>,(SP)
237
     000742
               052716
                          001001
                                                          BIS
238
239
    000746
000752
               052716
                          030000
                                                          BIS
                                                                    #Q$CNC,(SP)
               005046
                                                          CLR
                                                                     -(SP)
240
     000754
                                                          CALL
241
                                    176424
242
    . 000760
               012767
                          000005
                                               PRCD:
                                                          MOV
                                                                    #Q$RDCD,QR$LBR
                                                                                                    ; MOVE - ATTN CODE - TO - LOD - BUS - REG
    .000760
000766
000774
243
                                                                    #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2:;SET-ATTN-CODE READY
QR$CR2,R1 ;READ CSR2
#Q$ATTN,R1 ;ATTN-CLEAR-
               012767
                          120100
                                    176422
                                                          MOV
               016701
244
                          176422
                                                          MOV.
                                               1$:
245
     001000
               032701
                          000100
246
     001004
               001373
                                                          BNE
                                                                                                    :NO. READ AGAIN
247
                                                                    MSTR2,QR$LBR: ;CD:MEMORY START:ADDRESS
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
248
     001006
                016767
                          000000G-176424
                                                          MOV-
                                                                    MSTR2,QR$LBR
                                   176422
249
    001014
                012767
                          120040
                                                          MOV.
258
    001022
               016701
                          176422
                                               2$:
                                                          MOV.
                                                                    QR$CR2,R1
                                                                                                    :READ CSR2
     001026
                                                                                                    ;IS·CC·TO·CP·CLEAR
;NO, READ·AGAIN·
251
               032701
                          000040
                                                          BIT.
                                                                    #Q$CCCP,R1
252
253
     001032
               001373
                                                          BNE
                                                                    2$
254
     001034
                012767
                          000001
                                     176424
                                                          MOV.
                                                                     #1.QR$LBR
                                                                                                    :TRANSFER · COUNT · = · 1 WORD
255
     001042
               012767
016701
                          120040
176422
                                                          MOV.
                                    176422
                                                                    #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP
256
     001050
                                                                                                    ;READ·CSR2
;IS·CC·TO·CP·CLEAR·
;NO; READ·AGAIN·
                                               3$:
                                                                    OR$CR2.R4
     001054
                032701
                          000040
                                                          BIT.
                                                                    #Q$CCCP,R1
258
     001060
                001373
259
     001062 012767
269
                          000000G-176424
                                                          MOV
                                                                     #DATA1.QR$LBR
                                                                                                    :CC·MEMORY DATA-BUFFER
261 001070
               012767
                          120040 176422
                                                          MOV-
                                                                    #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP
263
                                                          WAIT-FOR-INTERRUPT-FROM-CP
264
265 001076
                                                          WTSE$S: #EFN.3
267
     001110
                                                          CLEF$S: #EFN.3
268
269
                                                          RE-ARM. INTERRUPTS
271
272
     001122
001130
                012767
                          100400
                                     176422
                                                          MOV
                                                                     #<Q$SM+Q$CHB>,QR$CR2
                                                                                                    :CLEAR · INTERRUPT · (USE · HIT · BUFFER · INT)
                012767
                          101000
                                                                     #<Q$SM+Q$REBK>;QR$CR2 ;RE-ARM
#<Q$SM+Q$ENBK+Q$ENOP>;QR$CR2 ;ENABLE
                                     176422
                                                          MOM
     001136
                012767
                           160000
                                     176422
                                                          MOV
274
                                                                                                    PRINT MEMORY CONTENTS ....
     001144
001150
                                                                    PRDATA
PRCDX:
275
                                                          CALL
276
                103417
                                                                                                    :ADVANCE ADDRESS
:HAS UPPER MEMORY LIMIT BEEN REACHED
:NO. CONTINUE
:LOOP ON
                066767
026767
                          000000G-000000G-
                                                                     INCVAL,MSTR2
MSTR2,MEND
278 001152
                                                          ADD
279
     001160
                                                          CMP
     001166
                101674
                                                                     PRCD
                                                          BLOS
                                                                    #LOOP,BASE
PRCDX
MSTRT,MSTR2
281
     001170
                032767
                          000000G-000000G
                                                          BIT
                                                                                                    INIT START ADDRESS
282.001176
                901404
                                                          BED.
283 001200
                016767
                          000000G · 000000G
                                                          MOV
```

PRCD

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:AND REPEAT PRINT

CPPR-

284 001206

285

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286 001210 287 001212 288 001216 CLR MOV 005046 PRCDX: -(SP) #Q\$NCLK,-(SP) :CLEAR - NOTHING - IN - CSR1 :SET - NO-CLOCKS -012746 176000 CALL CLR CSR1 288 001216 289 001222 290 291 001226 292 001226 293 001234 005067 176422 QR\$CR2 ;SET-LOAD-MODE-PR2X: 042767 000000C-000000G BIC. #<ONCE+OUT>,BASE :CLEAR PRINT CONTROL FLAGS: :KILL AST: CALL JMP KILL CPXX 294 001240 000167 000000G

```
TO MAKE HATTE !!
CPPR-
          MACRO M1110 27-MAR-80 14:44 PAGE 6
                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     296
     297
298
                                                               PRINT-BUFFER COMMAND
     299
300
     301
          001244
                                                     PB2::
                                                                                                          :LOCATE NON-BLANK IN COMMAND & INE
     302.001244
                                                               CALL
                                                                          FIND
                                                                                                          OK, CONTINUE:
     303 001250
                     103004
                                                               BCC.
                                                                          1 $
     304
          001252
                                                                          ÉRR4
                                                               CALL
     305 001256
                     000167
                               000272
                                                                          PB2X
     306
                                                                          #PB2LN.R0
#PB2TBL.R2
     307
          001262
                     012700
                               000003
                                                               MOV-
                                                     1$:
                                                                                                         :NUMBER OF TABLE ENTRIES :POINT TO TABLE
     308
          001266
                     012702
                                                               MOV.
     389
          001272
                                                               CALL
                                                                          SCAN
                                                                                                          : MATCH - AGAINST - COMMAND - LINE -
     310 001276
                     103004
                                                               BCC-
                                                                          2$
                                                                                                          :MATCH-WAS MADE
          001300
                                                               CALL
                                                                          ERR7
                                                                                                          ; "INVALID · MEMORY · MNEMONIC
     312·001304
313
                     000167
                               000244
                                                                JMP
                                                                          PB2X
     314 001310
315
                     000171
                               000000
                                                     2$:
                                                               .IMP
                                                                          @(R1)
                                                                                                          ;JUMP.TO.ROUTINE
     316
317
                                                               PRINT-HIT-BUFFER-
     318
     319
          001314
     328
                                                     PB2HB::
     321
          001314
                                                                                                          :HOW-TO-STOP-PRINT:
:R3 -> HIT LIST BUFFER:
:NUMBER OF WORDS IN BUFFER:
                                                               CALL
                                                                          HANG
     322-001320
                     012703
                                                               MOV
                                                                          #HLB.R3
                                000000G
                     012700
012705
012702
                                                                          #128..R0
#PRINT.R5
     323
          001324
                               000200
000000G
                                                               MOV
          001330
                                                                                                          :R5 -> PRINT-LINE:
:NUMBER-OF WORDS-PER PRINT-LINE:
:LOAD-WORD TO PRINT-INTO-R1
     324
                                                     1$:
                                                               MOV
      325
          001334
                                                                          #12..R2
                                000014
                                                               MOV
     326
          001340
                     012301
                                                                MOV
                                                                           (R3)+,R1
                                                                                                          CONVERT TO ASCII HEX:
FINISHED WITH TABLE ?
      327
          001342
                                                               CALL
                                                                          UNPK
     328 001346
                     005300
                                                               DEC
                                                                          R0
                                                                                                         ;YES, EXIT
;FINISHED.WITH.CURRENT.PRINT.LINE.?.
;YES, WRITE.TO.CONSOLE.
;BUMP.PRINT.LINE.POINTER.
          001350
                     001413
                                                               BEO
                                                                          4$
      330
          001352
                     005302
                                                                DEC
                                                                          R2
     331 001354
332 001356
                     001402
                                                               BEQ
                                                                          3$
                     005205
                                                                INC
                                                                          R5
      333
          001360
                                                                                                          GET NEXT WORD
      334
                                                                                                          ;WRITE-TO-TERMINAL
;CONTINUE-WRITING-
;NO. EXIT-
     335
          001362
                                                               CALL
BIT:
                                                                          CONSOL-
      336
          001366
                     032767
                                000000G · 000000G
                                                                          #LOOP,BASE
           001374
                     001467
                                                                BEQ.
                                                                          PB2X
      338 001376
                     000754
                                                                BR
                                                                                                          ; INITIALIZE · NEXT · PRINT · LINE
     339
340
          001400
                                                     4$:
                                                                CALL
                                                                          CONSOL
                                                                                                          :WRITE TO TERMINAL
          001404
                     000463
                                                                          PB2X
      341
      342
                                                               PRINT.OUT.HRL.BUFFER.
      343
      344
      345
      346
          001406
                                                     PB2HL::
                                                                                                          :HOW-TO-STOP-PRINT
:R3 -> HRL BUFFER
:NUMBER-OF LIDRDS IN BUFFER
:HEART LINE
      347
          001406
                                                               CALL
                                                                          HANG
          001412
      348
                     012703
                                                               MOV.
                                                                          #HRL,R3
                                вававав.
     349
          001416
                     012700
                                000200
                                                               MOV.
                                                                          #128..R0
     350 001422·
351 001426
                     012705
012702
                               000000G
                                                     1$:
                                                               MOM-
                                                                          #PRINT, R5
                                                               MOV-
                                                                          #12..R2.
(R3)+.R1
                                                                                                          NUMBER OF WORDS PER PRINT LINE : ;LOAD WORD TO PRINT INTO RI
                               000014
     352 001432
                     012301
                                                               MOV
```

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* of .

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MACRO M1110 27-MAR-80 14:44 PAGE 6-2
TABLE Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL TABLE -
ALUCKE = · 040000
ALUCE · = · 004000
                                  BYTE38= 000046
                                                                   BYTE9 = MAMMAIL
                                                                                                    LOC: EN= 000100
                                                                                                                                      Q$CHRL=:000200
                                  BYTE39= 000047
BYTE4 = 000004
                                                                   BYTE90= 000132
                                                                                                    LOC.WA- 040000
LOC.WB- 100000
LOOP - ******** GX-
                                                                                                                                      Q$CLR · = · 000040
Q$CNC · = · 030000
601
       = 010000
                                                                   BYTE91 = . 000133
                                  BYTE40= .000050
                                                                                                                                             = 000060
                                                                   BYTE92= nnn134
BCL -
        = - жжококок БХ
                                  BYTE41= 000051
                                                                   BYTE93 = - 000135
                                                                                                     MAREN1=-000001
                                                                                                                                      Q$CPCC= 000010-
                                 BYTE42= 000052
BYTE43= 000053
BINUD - = · ****** GX
                                                                                                                                      Q$CP2-=-000260;
Q$CSC-=-010000
                                                                   BYTE94= 000136
                                                                                                    MAREN2 = : 004000
BITVAL = . 000000
                                                                   BYTE95 = . 000137
                                                                                                    MARLOD = 010000
BIT0 = 000001
                                  BYTF44= : 000054
                                                                   BYTE96= 000140
BYTE97= 000141
                                                                                                     MAROUT= 0000002
                                                                                                                                      Q$CSEL = . 000360
BITI
        = 0000002
                                  BYTE45= 000055
                                                                                                    MAR.LO=-002000
MAR.CO=-002000
MBKALL=-001000
MBKCLK=-000400
MEND----********
                                                                                                                                      Q$CSET= 0000002
BIT10 = 002000
                                  BYTE46= 000056
                                                                   BYTE98= 000142
                                                                                                                                      Q$CSP·=·020000
Q$DMA·=·000001
Q$ENBK=·040000
BIT11 = 004000
                                  BYTE47= 000057
BYTE48= 000060
                                                                   BYTE99= 000143
BIT12 -- 010000
                                                                   BYTVAL = . 000144
BITi3 = 020000
                                                                   CBKALL = 001000
CBKCLK = 000400
CDHIGH = ********** GX-
                                  BYTE49= 000061
                                                                                                                                      0$ENOP= 020000
BIT14 = 040000
                                  BYTE5 = 000005
                                                                                                    MMADRD= 000100
MMLEFT= 000002
MMOE = 000004
                                                                                                                                      Q$FAL - = - 004000
BIT15 = 100000
                                  BYTE50 = . 000062
                                                                                                                                              = 000045
                                                                                                                                      O$FC
       = 000004
BIT2.
                                 BYTE51 = 0000063
BYTE52 = 000064
                                                                   CDLOW = ****** GX
                                                                                                                                      Q$F0
                                                                                                                                              = 0000044
         = 000010
BIT3
                                                                   CHOBRE = 100000
                                                                                                    MMWRTE = . 000010
                                                                                                                                      O$FP
                                                                                                                                              = 000046
BIT4
                                 BYTE53= 0000065
                                                                                                    MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
                                                                                                                                      Q$HBF.=.000002
Q$ICP = 000006
Q$IHB = 000003
                                                                   CONSOL = · ******
BITS
        = 000040
                                  BYTE54= 000066
                                                                   CPCCEN= 010000
                                                                   CPCR+ = ******* GX*
CPLB+ = ******* GX
        = .000100
BIT6
                                 BYTE55 - 000067
                                 BYTE56=-000070
BYTE57=-000071
BIT7
         = 000200
                                                                                                     MRPCR · = · *****
                                                                                                                                      Q$IHRL= 000002
BIT8.
        = 000400
                                                                   CPREAD = 040000
                                                                                                     MSTRT - - ******* GX
                                                                                                                                      Q$IMRP=:000007
Q$LBD:=:001000
                                                                   CPWRTE=-020000
CPXX- =-******
        = 001000
BIT9
                                  BYTE58= 000072
                                                                                                     MSTR2 - - жижижик GX
BUFSET= ****** GX
                                 BYTE59 = 000073
BYTE6 = 000006
                                                                                                     MSYN = 000040
                                                                                                                                      Q$LBDP= 001001
BUFS4 = ×××××× GX
                                                                   CSADRD= 000004
CSEQCI= 100000
                                                                                                             = 000144
                                                                                                                                      Q$LBP - = - 000001
BYTE0 = 000000
BYTE1 = 000001
                                  BYTE60= 000074
                                                                                                     ONCE -
                                                                                                             = жжжжжж СУ
                                                                                                                                      Q$LDCD= 000003
Q$LDMD= 000004
                                 BYTE61 = 000075
BYTE62 = 000076
                                                                   CSHIGH= · ***** GX ·
                                                                                                             = · ***** GX
                                                                                                     OUT:
BYTE10= 000012
                                                                   CSLOW- = - *******
                                                                                                     PACK-
                                                                                                                                      Q$LDPP=
                                                                                                                                                 002000
BYTE!1= 000013
                                  BYTE63= 000077
                                                                   CSOE = 000040
CSR1 = ********** GX
                                                                                                     PB2
                                                                                                                001244RG
001500RG
                                                                                                                                002.Q$LHP.=.010000
002.Q$MNC.=.140000
                                 BYTE64= 000100
BYTE65= 000101
BYTE12= nnnn14
                                                                                                     PB2BL
                                                                                                                                002
002
BYTE13= 000015
                                                                                                                                      Q$MR = 000052
Q$MRP = 000040
                                                                   CSWRTE=-000100
                                                                                                     PB2HB
                                                                                                                001314RG
BYTE14= 000016
                                  BYTE66=-000102
                                                                   DATA1 = · мжжжжжж GX
DATA2 · = · жжжжжжж GX
                                                                                                     PB2HL -
                                                                                                                001406RG
                                                                                                                                 002
BYTE15= 000017
                                  BYTE67= 000103
                                                                                                                                Q$MRP2=-000240
002-Q$MSC-=-040000
002-Q$MSET=-000004
                                                                                                     PB2LN - - 000003 G
BYTE16≈ ⋅ 000020
                                  BYTE68= 000104
                                                                   DATA3 = · ********* GX
                                                                                                    PB2TBL · PB2X ·
                                                                                                                000010RG
BYTE17= 0000021
                                  BYTE69= 000105
                                                                   DATA4 = · ********** GX
                                                                                                                001554R
BYTE18=:000022
                                  BYTE7 = · 000007
                                                                   DBR.RD=-000001
                                                                                                                                      Q$MSP - = - 100000
                                                                                                     PLB.
                                                                                                                000010
BYTE19=-000023
                                  BYTE70=:000106
                                                                   DB$CPP= 001457
DB$SPT= 000026
                                                                                                                000020
                                                                                                                                      Q$NCLK= 176000
                                                                                                                                U$NCLN--17-0000

Q$PP = 000100

Q$PPSW=-000320

Q$PP2-=-000300

002-Q$QHTT=-000013
                                  BYTE71= 000107
                                                                                                     PLD:
                                                                                                                000030
BYTE20= 000024
                                  BYTE72= 000110
                                                                   DB$TPC= 000023
                                                                                                     PLRWR: =:000200
BYTE21=-000025
BYTE22=-000026
                                  BYTE73= 000111
                                                                   DISPGS= 100000
                                                                                                     PLR.EN= 000200
                                  BYTE74= 000112
BYTE75= 000113
                                                                   DMAAWR = - 0000005
                                                                                                     PRCD.
                                                                                                                000760R
BYTE23= 0000027
                                                                   DMARRD = - 000003
DMARWR = - 000004
                                                                                                     PRCDX-
                                                                                                                                                 000043
                                                                                                                001210R
BYTE24= 000030
                                  BYTE76= 000114
                                                                                                                                      Q$QLA - = - 000053
                                                                                                     PRDATA= · ****** GX
BYTE25= 000031
                                  BYTE77= 000115
                                                                   EFN.3 = *******
                                                                                                     PRINT - - ****** GY
                                                                                                                                      DSDLR = 000054
                                                                                                                                      0$0LB = 000054
0$00 = 7000001
0$00 = 7000042
0$RDCD= 000005
0$RDMD= 000006
BYTE26= 000032
                                                                                                                000024RG
                                  BYTE78=:000116
                                                                   ENBR · = ·
                                                                              010000
BYTE27=:000033
                                  BYTE79= 000117
                                                                   ERR11 = ******** GX**
ERR4 = ******** GX**
                                  BYTE8 - 000010
BYTE28=-000034
                                                                   ERR4
BYTE29= 0000035
BYTE3 = 000003
                                  BYTE80 = . 000120
                                                                   ERR5
                                                                            = · ****** GX
                                                                                                     PR2LN = 000002 G
                                  BYTE81=-000121
BYTE82=-000122
                                                                   FRR7
                                                                                                     PR2TBL ·
                                                                                                                000000RG
                                                                            *****
                                                                                                                                      · Q$REBK= · 001000
BYTE30= 000036
                                                                            =·******* GX
                                                                   FIND
                                                                                                     PR2X-
                                                                                                                001226R
                                                                                                                                      · Q$RNC · = · 006000
BYTE31=-000037
                                  BYTE03=-000123
                                                                                                     QR$CR1= 176420
                                                                   HANG
                                                                            = · ********** GX
                                                                                                                                      £$RSC -: 004000
BYTE32= 000040
                                  BYTE84= 000124
                                                                   HLB.
                                                                                                     QR$CR2=:176422
                                                                                                                                      Q$RSET= 000010
Q$SM = 100000
BYTE33= 000041
                                                                                                     QR$LBR= 176424
                                 BYTE85 = . 000125
                                                                   HР
                                                                            = - жжекекеж БХ
BYTE34= 0000042
                                  BYTE86= 000126
                                                                   INCVAL = · ********** GX
                                                                                                     Q$ATTN= 000100
Q$BCL = 000001
                                                                                                                                      0$5P 000120
0$5P2 000340
                                                                   KILL = ******* GX
BYTE35 = . 000043
                                 BYTE67=-000127
BYTE36= 000044
                                 BYTE88 = . 000130
                                                                                                     Q$CCCP= 000040
                                                                                                                                       RGQ.EN= 000200
                                 BYTE89= 000131
                                                                    LBMRP
                                                                                         0$CHB = 000400
CIA-RDP85-00514R000200020001-3
                                                                                                                                       RGQ.VA= 020000
                                              Approved For Release 2005/07/12
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THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NA
                              0-M1110 27-MAR-80 14:44 PAGE-6-3
Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
SYMBOL . TA
RTNPT: = · ****** GX:
                                                            T$DISK=-000200
                                                                                                                      WORD: = 0000002
                                                                                                                                                                                 WORD40=-000120
                                                                                                                                                                                                                                           WORD71= 000216
SCAN: =:***** GX:
                                                            T$DRD - - 000004
                                                                                                                                                                                WORD41= 000122
WORD42= 000124
WORD43= 000126
                                                                                                                      WORD10= 000024
WORD11= 000026
                                                                                                                                                                                                                                           WORD72=-000220
SEQCS = ****** GX
                                                            T$EMEM= -010000
                                                                                                                                                                                                                                           WQRD73= 000222
WQRD74= 000224
SEQMM = ******* GX
                                                            T$FSAA= · ЙИЙИЙИ
                                                                                                                      WORD12= 000030
SEQ.CI=-000010
                                                            T$FSAB= 000004
                                                                                                                      WORD13= 000032
                                                                                                                                                                                 WORD44= 000130
                                                                                                                                                                                                                                           WORD75=-000226
S$CLR - = - 000000
                                                            T$FSAC= 000014
                                                                                                                      WORD14= 000034
WORD15= 000036
                                                                                                                                                                                 WORD45 - .000132
                                                                                                                                                                                                                                           WORD76= 000230
WORD77= 000232
S$LA - - 000001
                                                            T$FSB2=-000010
                                                                                                                                                                                WORD46= 000134
WORD47= 000136
S$QB· = 000005
                                                                                                                      WORD16=-000040
WORD17=-000042
WORD18=-000044
                                                            T$IB · ≃ · 000026
                                                                                                                                                                                                                                            WORD78= 000234
S$QR· = 000006
                                                            T$IBAR= 000024
                                                                                                                                                                                 WORD48 = . 000140
             = 0000004
                                                                                                                                                                                                                                           WORD79= 000236
WORD8 = 000020
                                                           T$IBE - - 020000
T$IBF - - 040000
S$0X-
                                                                                                                                                                                 WORD49= 000142
              = · 000004
= · 000010
= · 000014
                                                                                                                      WORD19= 000046
WORD2 = 000004
WORD20= 000050
                                                                                                                                                                                WORD5 = 000012
WORD50= 000144
                                                                                                                                                                                                                                            WORD80= 000240
S$S1
                                                            T$ICD -- 000040
 S$S2
                                                                                                                                                                                                                                           WORD81= 000242
WORD82= 000244
                                                            T$MODE=-004000
                                                                                                                                                                                WORD51 = .000146
WORD52 = .000150
 TD$CTR= 176370
                                                            Т$0B · = · ииииз6
                                                                                                                      WORD21 = . 000052
TD$CTW=-176360
TD$INL=-004000
TD$MEM=-000270
TD$OAR=-176344
                                                                                                                                                                                                                                           WORD83= 000246
                                                            T$0BE - = - 004000
                                                                                                                      WORD22= 000054
WORD23= 000056
                                                                                                                                                                                 WORD53= 000152
                                                                                                                                                                                                                                           WORD84= 000250
WORD85= 000252
                                                            T$0BF·=·010000
                                                                                                                                                                                 WORD54= 000154. ..
                                                                                                                                                                                WORD54= 00010 ...
WORD55= 000156 ... ...
                                                            T$0BRA= 000034
                                                                                                                      WORD24= 0000060
                                                                                                                                                                                                                                           WORD86= 000254 /
                                                           T$08WA= 000032
T$0UTA= 100000
                                                                                                                      WORD25= 000062
                                                                                                                                                                                WORD56= 000160
WORD57= 000162
WORD58= 000164
                                                                                                                                                                                                                                           WORD87= 000256
 TD$0TR=-176346
                                                                                                                      WORD26= 000064
                                                                                                                                                                                                                                           ŴORD88=:000260
WORD89='000262
WORD9 =:000022
TD$QRD= 000274
TD$SW = 176376
TD$TAR= 176372
                                                            T$RBD0= 000200
                                                                                                                      WORD27=-000066
WORD28=-000070
                                                           T$RNB. = .000040
T$RNB. = .000040
T$RSET= .040000
T$SC. = .000022
T$SCLK= .02000
                                                                                                                                                                                 WORD59= 000166
                                                                                                                       WORD29= 000072
                                                                                                                                                                                 WORD6 = 000014
                                                                                                                                                                                                                                           WORD90= 000264
WORD91= 000266
TD$TAW= 176362
TD$TDR= 176374
                                                                                                                      WORD3 = 000006
WORD30= 000074
                                                                                                                                                                                 WORD60= 000170
                                                                                                                                                                                                                                           WORD91 = 000266
WORD92 = 000270
WORD93 = 000272
WORD94 = 000274
WORD95 = 000276
                                                                                                                                                                                WORD61=-000172
WORD62=-000174
WORD63=-000176
 TD$TDW= 176364
                                                           T$SEG1=-000000
T$SEG2=-000001
                                                                                                                       WORD31= 000076
T$AD -- 000020
T$BA -- 000002
                                                                                                                      WORD32= 000100
                                                            T$SEG3=-000002
                                                                                                                      WORD33= 000102
                                                                                                                                                                                 WORD64= 000200
T$BD· = 000010
                                                            T$SO· = 0000001
                                                                                                                      WORD34= 000104
                                                                                                                                                                                                                                           WORD96, 000300
WORD97 000302
                                                                                                                                                                                 WORD65=-000202
 T$BSO·= 100000
                                                            T$UBUS=-100000
                                                                                                                      WORD35= 000106
                                                                                                                                                                                WORD66=-000204
WORD67=-000206
T$BT = 000020
                                                                                                                     WORD36=-000110
WORD37=-000112
                                                            T$1CLK= 000400
                                                                                                                                                                                                                                           WORD98-000304
 T$8TAR=-000030
                                                            T$8BEN= 000020
                                                                                                                                                                                 WORD68 = . 000210
                                                                                                                                                                                                                                         WORD99= 000306
WRDVAL= 000310
T$BTD·≕.002000
T$CD· ≕.000100
                                                           UBD: IN= 000020
                                                                                                                      WORD38= 000114
                                                                                                                                                                                WORD69=∷2000212
WORD7 = 000016
                                                           UNPK - - ****** GX
                                                                                                                      WORD39 = 000116
                                                                                                                                                                                                                                           XTREAD = 001000
T$CLK - = - 002000
                                                           WORD0 = 000000
                                                                                                                      WORD4 = 000010
                                                                                                                                                                                 WORD70= 000214
                                                                                                                                                                                                                                           XTWRTE=-000400
 . ABS.
                   000000
                                               999
                   000000
                                              ดด 1
CPPR
                   001564
                                              002
ERRORS DETECTED:
                                           Ø
                                         GED: 3671 WORDS: (-15 P
4916 WORDS: (-18 PAGES)
VIRTUAL MEMORY HISED:
DYNAMIC MEMORY:
ELAPSED TIME: 00:00:50
CPPR, GPPR/-SP=[20,1]IM, [20,1]CPPR
```

. .

```
BCE- ... MACRO M1110 27-MAR-80 14:35 PAGE 6
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     45
46
47
                                                         BCE - ROUTINES
                                                                                                                                        Time Brown
      48
     49
50
         000014
                                               BCE::
     51
         000014
                   004767
                            000000G
                                                          JSR
                                                                                      :LOCATE · THE · COMMAND · IN · THE · COMMAND · LINE
                                                                   PC.FIND.
     52
53
54
         000020
                   103003
                                                         BCC
                                                                   1$
                                                                                      OK, CONTINUE.
         000022
                   004767
                            ивавия в
                                                          JSR.
                                                                   PC, ERR3
         000026
                   000422
                                                         BR.
                                                                   BCEXX.
     55
56
         000030
                   022700
001403
                             000002
                                                1$:
                                                         CMP
                                                                   #2,R0
                                                                                      :COMMANDS ARE 2 CHARS
         000034
                                                         BEQ
                                                                   2$
      57
         000036
                                                                   PC ERR8
                   004767
                             000000G
                                                         JSR
     58
59
         000042
                   000414
                                                         BR
                                                                   BCEXX-
                                                                                      :TRY-AGAIN-
      60
         000044
                   012700
                             000003
                                                2$:
                                                         MOV
                                                                   #BCHUM, RØ
                                                                                          = · NUMBER · OF · COMMANDS ·
         000050
      61
                   012702
                                                                                      :R2--> TABLE-OF-COMMAND-MNEMONICS
:FIND-MATCH-IN-TABLE-
                             AAAAAAA'
                                                         MOV-
                                                                   #BCTBL,R2
                                                         JSR
BCC
      62
         000054
                   004767
                                                                   PC.SCAN
                             000000G
      63
         000060
                   103003
                                                                   3$
                                                                                      OK, CONTINUE.
     64
65
         000062
                   004767
                             000000G
                                                          JSR
                                                                   PC.ERR12
                                                                                      COMMAND NOT IN TABLE
         000066
                   000402
                                                         BR
                                                                   BCEXX:
                                                                                      :TRY-AGAIN
      66
      67
                                                         JUMP - TO - THE - ROUTINE - THAT - GOVERNS THE - COMMAND
      68
      69
         000070
                   000171
                            000000
                                                         JMP.
                                                                   @(R1)
                                                3$:
      70
      71
      72
73
                                                         LOCAL BCE LOOP. INCLUDE PROMPT FOR BCE COMMAND.
      74
75
         000074
                                                BCEXX::
      76
         000074
                   012767
                             041502
                                                         MOV
                                                                   ##BC.GCMBLK+G.DPRM+2::MOVE:BCE:NAME:TO:GCM;BLOCK:PC.GCONLY::PROMPT:
                                      000000C
         000102
                   004767
                             000000G
                                                         JSR
         000106
                   004767
                             000000G
                                                          JSR
                                                                   PC,FIND
                                                                                      LOCATE - THE - COMMAND - IN : THE - COMMAND - LINE
      79
         000112
                   103003
                                                         BCC
                                                                   1$
                                                                                      :OK, CONTINUE
         000114
                                                          JSR
      80
                             000000G
                   004767
                                                                   PC,ERR3
      81
         000120
                   000765
                                                         BR
                                                                   BCEXX.
      82
         000122
                   022700
                             000002
                                                1$:
                                                          CMP
                                                                   #2,R0
                                                                                      :COMMANDS ARE 2 CHARS
         000126
000130
      83
                   001403
                                                         BEQ
                                                                   2$
      84
                   004767
                             000000G
                                                                   PC,ERR8
                                                          JSR.
      85
         000134
                   000757
                                                         BR
                                                                   BCEXX-
                                                                                      :TRY-AGAIN
      86
                                                                                      #RØ = NUMBER OF COMMANDS
#R2--> TABLE OF COMMAND MNEMONICS
#FIND MATCH IN TABLE
      87
         000136
                   012700
                             000003
                                                2$:
                                                         MOV
                                                                   #BCHUM, RØ
         000142
                             ававава:
                                                         MOV.
      88
                   012702
                                                                   #BCTBL,R2
         000146
      89
                   004767
                             000000G
                                                                   PC,SCAN.
      90
         000152
                   103002
                                                         BCC
                                                                   3$
                                                                                      :OK, CONTINUE
                                                                                      RETURN TO MAINS LOOK FOR PROCESSOR MNEMONIC
      91
         000154
                   000167
                             000000G
      92
      93
                                                          JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
      94
      95
         000160
                   000171
                                                3$:
                                                          JMP
                                                                   @(R1)
                             000000
      96
97
                   000001
                                                          .END
```

A MANAGEMENT OF THE STATE OF TH

```
ALTICKE = 040000
                                BYTE39= 000047
                                                                 BYTE90= 000132
                                                                                                        = 000144
                                                                                                                                 Q$QLR·=·000001
Q$QW =·000042
ALU0E - 004000
A01 = 010000
                                BYTF4 = 000004
                                                                BYTE91 = 000133
BYTE92 = 000134
                                                                                                 PLB.
                                                                                                        = 000010
AØ1
                                BYTE40= 000050
                                                                                                        = 000020
                                                                                                                                 Q$RDCD= 000005
                           002 BYTE41 = 000051
           000014RG
                                                                 BYTE93 = . 000135
                                                                                                        = .000030
                                                                                                 PID.
                                                                                                                                 Q$RDMD= 000006
                                                                 BYTE94= 000136
BOEXX:
          000074RG
                           002-BYTE42=-000052
                                                                                                 PLRWR - = - 000200
                                                                                                                                 Q$REBK=-001000,
Q$RHC-=-006000
Q$RSC-=-004000
BCHUM- = - 000003
                                BYTE43 = 000053
                                                                BYTE95= 000137
BYTE96= 000140
BYTE97= 000141
                                                                                                 PLR:EN= 000200
          000000R
                           002 · BYTE44= · 000054
                                                                                                OR$CR1= 176420
OR$CR2= 176422
OR$LBR= 176424
BITVAL = 0000000
BIT0 = 000001
BIT1 = 0000002
                                BYTE45= 000055
                                                                                                                                 Q$RSET= .000010
                                BYTE46 = . 000056
                                                                 BYTE98= 000142
                                                                                                                                 Q$SM = 100000
Q$SP = 000120
                                                                                                Q$ATTN=.000100
Q$BCL.=.000001
                                BYTE47 = . 000057
                                                                 BYTE99= 000143
BIT10 = 002000
                                BYTE48= 000060
                                                                                                                                 U$5F --00072
Q$SP2-=-000340
RE3 =-жжжжжж GX-
                                                                 BYTVAL = 000144
CBKALL = 001000
BIT11 = 004000
                                BYTE49= 000061
                                                                                                 Q$CCCP= 000040
BIT12 - - 0 10000
                                BYTE5 = 000005
                                                                 CBKCLK = · 000400
                                                                                                                                 RGQ.EN= 000200
                                                                                                 Q$CHB - = 000400
BIT13 = 020000
                                BYTE50= 000062
                                                                 CNOBRE = 100000
                                                                                                Q$CHRL=.000200
Q$CLR.=.000040
Q$CHC.=.030000
                                                                                                                                 RGQ.VA= 020000
                                BYTE51=-000063
BYTE52=-000064
BIT14 = 040000
                                                                                                                                 COMXX: =: ****** GX:
                                                                                                                                 RS3
BIT15 = 100000
                                                                 CPCCEN= 010000
BIT2 - - 000004
                                BYTE53= 000065
                                                                 CPREAD = 040000
                                                                                                 Q$CP· = 0000060
                                                                                                                                 SEQ.CI=.000010:

    - 000010

BIT3
                                BYTE54= 0000066
                                                                 CPWRTE = 020000
                                                                                                                                 ST3 . =, ******* GX
S$CLR = 000000
                                                                                                 Q$CPCC= 000010
        = 0000020
                                BYTE55=-000067
                                                                                                 0$CP2 - 0000260
0$CSC - 010000
                                                                 CSADRD= 000004
        = 000040
                                BYTE56= 0000070
BITS
                                                                 CSEQCI = 100000
CSOE = 1000040
CSWRTE = 1000100
                                                                                                                                 S$LA
                                                                                                                                       # 000001
        = .000100
RITE
                                BYTE57= 000071
                                                                                                                                       =/000005
=/000006
=/000004
                                                                                                 Q$CSEL = 000360
Q$CSET = 000002
                                                                                                                                 S#QB
        = 000200
                                BYTE58= 000072
                                                                                                                                 SKOR
                                BYTE59=.000073
BYTE6 =.000006
        = 000400
                                                                                                 Q$CSP.=.020001
Q$DMA.=.000001
                                                                 DBR.RD= 000001
DB$CPP= 001457
                                                                                                                                 S$QX
BIT9 = 001000
BYTE0 = 000000
                                BYTE60= 000074
                                                                 DB$SPT= 000026
                                                                                                 Q$ENBK = 040000
                                                                                                                                        = · 000010
= · 000014
                                                                                                                                 9$94
BYTE1 = 000001
                                                                DB$TPC=-000023
DISPGS=-100000
DMAAWR=-000005
                                BYTE61=-000075
BYTE62=-000076
                                                                                                 Q$ENOP= 020000
                                                                                                                                 9$92
BYTE10= 000012
                                                                                                 Q$FAL = 004000
Q$FC = 000045
                                                                                                                                 TD$CTR= 176370
BYTE11= 000013
BYTE12= 000014
                                BYTE63= 0000077
                                                                                                                                 TD$CTW= 176360
TD$INL= 004000
TD$MEM= 000270
                                BYTE64= 000100
BYTE65= 000101
                                                                 DMARRD= 000003
                                                                                                 Q$F0. = 000044
BYTE13= 000015
                                                                                                 Q$FP = 000046
Q$HBF = 000002
Q$ICP = 000006
                                                                DMARWR = 000004
ENBR · = 010000
BYTE14= 000016
                                BYTE66=-000102
                                                                                                                                 TD$0AR= 176344
TD$0TR= 176346
BYTE 15 = . 000017
                                BYTE67 = . 000103
                                                                 ERR12 - ******* GX
BYTE16= 0000020
                                BYTE68= 000104
                                                                                                                                TD$GRD= 000274
TD$GRD= 176376
TD$TARF 176372
TD$TARF 176362
FD$TARF 176362
                                                                 ERR3
                                                                       = · ********** GX ·
                                                                                                 Q$IHB - = -000003
                                BYTE69= 000105
BYTE7 = 000007
BYTE17= 000021
                                                                        = *********** GX*
                                                                                                 Q$IHRL= 000002
Q$IMRP= 000007
Q$LBD = 001000
                                                                ERRS
BYTE18= 0000022
                                                                 FIND.
                                BYTE70= 000106
BYTE19≈ 000023
                                                                 GCMBLK = · ***** GX
BYTE2 - = - 000002
                                BYTE71= 000107
BYTE72= 000110
                                                                 GCONLY= · ****** GX ·
                                                                                                 Q$LBDP=-001001
BYTE20=:000024
                                                                 G:DPRM= ·****** GX
                                                                                                 Q$LBP - - 00000T
                                                                                                                                 TD$TDW= 176364
BYTE21= 0000025
                                BYTE73= 000111
                                                                LOC.EN= 000100
LOC.WA= 040000
                                                                                                 Q$LDCD= 000003-
Q$LDMD= 000004
BYTE22= 000026
                                BYTE74= 000112
BYTE75= 000113
                                                                                                                                       = · 000002
= · 000010
                                                                                                                                 T$BA
BYTE23= 000027
                                                                 LOC:WB= 100000
                                                                                                 Q$LDPP= 002000
                                                                                                                                 T$RD.
BYTE24= 000030
                                BYTE76= 000114
                                                                                                 Q$LHP·=·010000
Q$MNC·=·140000
Q$MR· =·000052
                                                                 MAREN1 = 000001
                                                                                                                                 T$BSO - = - 100000
BYTE25= 000031
                                BYTE77= 000115
                                                                 MAREN2 = · 004000
                                                                                                                                        = 000020
BYTE26=:000032
                                BYTE78=-000116
                                                                 MARLOD = 010000
                                                                                                                                 T$BTAR=-000030
T$BTD-=:002000
BYTE27 = 000033
                                BYTE79= 000117
BYTE8 = 000010
                                                                MAROUT=-000002
                                                                                                 Q$MRP - = - 000040
BYTE28= · 000034
                                                                MAR.LO= 002000
MAR.OU= 000040
                                                                                                                                 T$CD = .000100.
                                                                                                 Q$MRP2= .000240
BYTE29=:000035
                                BYTE80= 000120
                                                                                                 Q$MSC - = · 040000
Q$MSET = · 000004
Q$MSP · = · 100000
                                                                                                                                 T$CLK = 002000
BYTE3 = 000003
                                BYTE81= 000121
                                                                 MBKALL= 001000
                                                                                                                              T$DISK+:000200
T$DRD:=:000004
T$EMEM=:010000
BYTE30 = . 000036
                                BYTE82= 000122
                                                                MBKCLK = . 000400
BYTE31=-000037
                                BYTE83= 000123
                                                                MMADRD= 000100
MMLEFT= 000002
                                                                                                 Q$NCLK 176000
Q$PP 000100
BYTE32= 000040
                                BYTE84= 000124
                                                                                                                                 T$FSAA= 000000
BYTE33= 000041
                                BYTE95 = . 000125
                                                                        - 000004
                                                                                                 Q$PPSW= 000320
                                                                                                                                 T$FSAB= 000004
T$FSAC= 000014
BYTE34= 0000042
                                BYTE86= 000126
                                                                MMWRTE = . 000010
                                                                                                 Q$PP2. = .000300
Q$QHLT= .000013
BYTE35=-000043
                                BYTE97 = . 000127
                                                                MNOBRE = 100000
                                                                                                                                 T$FSB2= 000010
BYTE36= 000044
                                BYTE88=: 000130
                                                                 MREN1 = 000001
                                                                                                 Q$QL - 000043
                                            T$IB
                                                                                                                                        - 000026
BYTE37= 000045
                                BYTE89= . 000131
                                                                                                                                 T$IBAR= 000024
BYTE38 = 000046
                                BYTE9
                                                                                                                                 T$IBE = 020000
```

```
BCE----MACRO-Mill0 27-MAR-80 14:35
                                                         PAGE: 6-2
SYMBOL TABLE
                                                 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
T$18F---040000
                                    WORD11= 0000026
                                                                        MORD34= 000104
                                                                                                            WORD57=-000162
                                                                                                                                                 WORDS = 000020
T$ICD·=·000040
                                    WORD12=-000030
                                                                        WORD35= 000106
                                                                                                            WORD58= 000164
                                                                                                                                                 WORD80= 000240
T$MODE = · 004000
                                                                                                            WORD59= 000166
                                    WORD13=-000032
                                                                        WORD36=-000110
                                                                                                                                                 WORD81= 000242
                                    WORD13-000034
WORD15-000036
WORD16-000040
WORD17-000042
T$08 · = · 000036
T$08E · = · 004000
                                                                        WORD37=-000112
                                                                                                            WORD6 = 000014
                                                                                                                                                WORD82=-000244
                                                                        WORD38= 000114
                                                                                                            WORD60= 000170
                                                                                                                                                 WORD83=-000246
T$0BF·=·010000
                                                                        WORD39= 000116
WORD4 = 000010
                                                                                                            WORD61= 000172
                                                                                                                                                WORD84= 999259
T$0BRA=-000034
T$0BWA=-000032
                                                                                                            WORD62=-000174
WORD63=-000176
WORD64=-000200
                                                                                                                                                 WORD85 = 000252
                                    WORD18= 000044
                                                                        WORD40= 000120
                                                                                                                                                 WORD86 = 000254
T$OUTA=:100000
                                    WORD19= 000046
WORD2 = 000004
                                                                        WCRD41= 000122
                                                                                                                                                WORD87= 000256
WORD88= 000260
T$RBD0=-000200
                                                                        WORD42= 000124
WORD43= 000126
                                                                                                            WORD65= 000202
T$RNB·=·000040
T$RSET=·040000
T$SC· =·000022
                                    WORD20= 000050
                                                                                                            WORD66 = 000204
WORD67 = 000206
                                                                                                                                                 WORD89= 000262
                                    WORD21=-000052
WORD22=-000054
                                                                        WORD44= 000130
                                                                                                                                                WORD9 = 000022
                                                                        WGRD45= 000132
WORD46= 000134
WGRD47= 000136
                                                                                                                                                WORD9 - 000022
WORD90 = 000264
WORD91 = 000266
                                                                                                            WORD68 = . 000210
T$SCLK= 020002
T$SEG1= 000000
                                    WORD23 = . 000056
                                                                                                            WORD69= 000212
WORD7 = 000016
WORD70= 000214
                                    WORD24=-000060
                                                                                                                                                 WORD92= 000270
T$SEG2=-000001
                                    WORD25=-000062
WORD26=-000064
WORD27=-000066
                                                                        WORD48 = . 000140
                                                                                                                                                WORD93= 000272
WORD94= 000274
T$SEG3= 0000002
                                                                        WORD49 - 000142
WORD5 - 000012
                                                                                                            WORD71= 000216
T$50. = 0000001
T$UBUS = 100000
T$1CLK = 000400
                                                                                                            WORD72= 000220
WORD73= 000222
WORD74= 000224
                                                                                                                                                 WORD95= 000276
                                    WORD28=-000070
WORD29=-000072-
WORD3 =-000006
                                                                        WORD50= 000144
                                                                                                                                                WORD96= 000300
WORD97= 000302
                                                                        WORD51-000146
T$8BEH= · 000020
                                                                        WORD52=-000150
WORD53=-000152
                                                                                                            WORD75-000226
                                                                                                                                                 WORD98= 000304
UBD.IN=-000020
WORD0 =-000000
WORD1 =-000002
                                    WORD30= 000074
WORD31= 000076
WORD32= 000100
                                                                                                            WORD76= 000230
WORD77= 000232
                                                                                                                                                 WORD99≈ 000306
                                                                        WORD54= 000154
                                                                                                                                                WRDVAL = - 000310
                                                                        WORD55= 000156
WORD56= 000160
                                                                                                            WORD78= 000234
                                                                                                                                                 XTREAD= : 001000
WORD10- 000024
                                    WORD33= 000102
                                                                                                            WORD79 = 000236
                                                                                                                                                 XTWRTE = 000400
. ABS.
            000000
                             000
            000000
                             001
                                                                                                                                                 -pattia tari
BCE
            000164
                            002
\textbf{ERRORS} \cdot \textbf{D} \textbf{ETECTED:}
                                                                                                                                                 1.1
                                                                                                                                       -7-5-
                           0
VIRTUAL MEMORY USED:
                                 3103 WORDS: (-13 PAGES)
DYNAMIC MEMORY: 3860 WORDS (
ELAPSED TIME: 00:00:42
BCE.BGE/SP=[20,1]IM,[20,1]BCE
                        3860 WORDS: ( 14 PAGES)
```

```
BCREST MACRO M:110 27-MAR-80 14:35 PAGE 5
                                              Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                                                                    .ŦITLE~ BGREST~
.PSECT~ BCREST
.LIST~ MEB~
        2.000000
3
4
5
                                                                    HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
BUS CONTROL ELEMENT TEST ROUTINES
        8
                                                                    COMMANDS:
       10
11
                                                                    ST
                                                                               STORE INTO A REGISTER
READ A REGISTER
MASTER HOR RESET
                                                                    ŔĖ
       12
13
14
                                                                    RS
       15
                                                                   STORE.
TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES.
       16
17
       18
       19
           000000
                                                        ŚT3TBL::
      20
22
23
24
25
26
27
28
29
31
           000000
000002
                                      061
                                                                    .ASCII
                                                                                                      CONTROL AND STATUS REGT#1
                      0001501
                                                                               ST3C1
/C2/
                                                                    .WORD
           000004
                          103
                                      062
                                                                                                     :CONTROL AND STATUS REG #2
           000006
                      000160
                                                                               ST302
                                                                    .WORD
                      114
000170
           000010
                                      102
                                                                    .ASCII-
                                                                              ZLBZ
                                                                                                      :LOD-BUS REG
           000012
                                                                    .WORD
                                                                               ST3LB
                      000003
                                                        ST3LH.
                                                                               <.-ST3TBL>/4
                                                                                                                      41460.40
                                                                   READ.
                                                                   TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE
                                                                   ADDRESSES:
      32
33
34
           000014
                                                        RE3TBL::
           000014
                           103
                                      061
                                                                    .ASCII-
                                                                                                     ;CONTROL AND STATUS REG #1
           000016
                      000310
                                                                    .WORD
                                                                               RE3C1
      35
36
37
           000020
                           103
                                      062
                                                                    .ASCII
                                                                               ZC2Z
                                                                                                     :CONTROL AND STATUS REG #2
           000022
                      000316
                                                                    .WORD
                                                                              RE302
           000024
                      114
000324
                                      102
                                                                    .ASCII
                                                                               /LB/
                                                                                                     :LOD-BUS REG
           000026
      38
39
40
41
43
44
45
46
47
48
                                                                               RE3LB
                                                                    .WORD
                      000003
                                                        REJLH
                                                                               <.-RE3TBL>/4
                                                                   STORE:
PERFORM: THIRD: LEVEL: PARSING
EG. IN: THE: COMMAND:
BC>ST:0 C1
PARSE: THE: '0'
       49
           000030
                                                        ST3::
                                                                                                     FIND A NON-BLANK IN COMMAND LINE.
OK. CONTINUE:
NOTHING THERE.
RETURN TO TOP OF LOOP (PROMPT)
CONVERT VALUE IN COMMOND IN TOP OF LOOP.
       50
           000030
                      004767
                                 000000G
                                                                    JSR
                                                                              PC.FIND
      51
52
           000034
                      103004
                                                                   BCC
                                                                               15
                                 0000006
000146
0000006
          000036
                      004767
                                                                    JSR
                                                                               PC, ERR4
      53
          000042
                      000167
                                                                    JMP
                                                                               ST3X
      54
55
56
          000046
                      004767
                                                        1$:
                                                                   JSR
                                                                              PC,PACK
          000052
                      103004
                                                                   BCC
                                 000000G
          000054
000060
                      004767
000167
                                                                              PC, ERR5
                                 000130
```

JMP

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BCREST-
              0.M1110 27-MAR-80 14:35 PAGE 5+1
                                         Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3
      58
      59
                                                            CONTINUE PARSING
      60
                                                           FIND THE REGISTER MNEMONIC IN THE COMMAND LINE
      61
      62.000064
                    004767
                                                                      PC.FIND.
                                                                                          ;LOCATE · A · NON-BLANK
         000070
000072
                   103004
      63
                                                            BCC
                                                                      3$
      64
                              000000G
                                                                      PC.ERR4
                                                            ISP
      65
                    000167
                              000112
                                                                      ST3X
      66
      67
                                                            MATCH THE MNEMONIC FROM THE COMMAND LINE AGAINST THE
      68
                                                            TBALE OF VALID MNEMONICS.
      70
71
         000102
000106
                    312700
                              000003
                                                                      #ST3LN,R0
                                                                                          :NUMBER:OF:TABLE:ENTRIES:
:R2:-> TABLE:
:MATCH:AGAINST:COMMAND:LINE
                   012702
004767
                              явавая.
                                                            MOV
                                                                      #ST3TBL,R2
      72
73
74
75
76
77
78
79
         000112
                              000000G
                                                            JSR
                                                                      PC,SCAN
         000116
                    103004
                                                            BCC
                                                                      4$
                                                                                          OK, CONTINUE
         000120
                    004767
                              000000G
                                                            JSR
                                                                      PC, ERR6
         000124
                    000167
                              000064
                                                                      ST3X
                                                           SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE REGISTER, R1 -> ROUTINE ADDRESS.
CALL ROUTINE TO SCAN COMMAND LINE FOR LOOP INDICATOR.
      80
                                                           EG. BC/ST-0 C1 L.
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT.
JUMP-TO-ROUTINE-TO-LOAD-REGISTER.
      81
82
      83
         000130
      84
                              000000G
                                                                                          :SAVE-POINTER-TO-RTN ;LOOP?-
                                                  4$:
                                                           MOV-
                                                                     R1.RTHPT.
PC.LOOPR.
      85
         000134
                   004767
016701
                              000000G
                                                            JSR
      86
         000140
                                                                                          :POINT TO ROUTINE
                              000000G
                                                  ST3IN:
                                                           MOV
                                                                      RTHPT,R1
      87
         000144
                    000171
                             000000
                                                            JMP.
                                                                      @(R1)
                                                                                          :EXECUTE ROUTINE
      88
      89
      90
                                                           CONTROL AND STATUS REG #1
      92.
         000150
                                                  ST3G1::
      93
         000150
                    016767
                              000000G-176420
                                                           MO v
                                                                     BINWD,QR$CR1
                                                                                          : MOVE · USER · WORD · TO CSR ·
      94
         000156
                    000410
                                                                      ST3LP
                                                                                          :TEST-FOR-REPEAT
      95
      96
                                                           CONTROL AND STATUS REG #2
      97
      98
         000160
                   016767
                              000000G-176422-
                                                  ST302::
                                                           MOM
                                                                      BINWD.QR⊈CR2
                                                                                          :MOVE · USER · WORD
      99
         000166
                   000404
                                                                      ST3LP
     100
     101
                                                           LOD-BUS-REG-
     102
     103 000170
                   016767
                              000000G-176424
                                                  ST3LB:: MOV
                                                                      BINWD,QR$LBR
                                                                                          :MOVE-USER-WORD-TO LOD-BUS-REG
     104
         000176
                    000400
                                                           BR
                                                                      ST3LP
                                                                                          :TEST-FOR-REPEAT
     105
     106
     107
         000200
                                                  ST3LP:
     108
         000200
                              000000G - 000000G
                                                           BIT.
                                                                      #LOOP,BASE
                                                                                          :REPEAT ?
     109
         000206
                   001402
                                                                      ST3X
                                                                                          : NO
     110
         000210
                   000167
                              177724
                                                            JMP.
                                                                      ST3IN
                                                                                          :AND REPEAT
    112.000214
113.000214
                                                  ST3X:
                   884767
                             000000G
                                                           JSR
                                                                     PC.KILL
                                                                                          :KILL-AST
                   000167
                             000000G
                                                           JMP.
                                                                     BOEXX
                                        Approved For Release 2005/07/12 : CIA-RDP85-005-14R000200020001-3
```

1.500 100

```
BCREST- MACRO M1110 27-MAR-80 14:35 PAGE 6
                                         Approved For Release 2005/07/12 : CIA-RDP85-0
     116
     117
     118
                                                            READ
                                                            PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
BC>RE C1
PARSE THE 'C1'
     120
     121
122
     123
     124
125
126
         000224
                                                  RE3::
          000224
                    304767
                              000000G
                                                             JSR
                                                                                          #FIND-A-REG-MNEMONIC-IN-COMMAND-LINE
#OK, CONTINUE
#NOTHING THERE
#RETURN-TO-TOP-OF-LOOP-(PROMPT)
                                                                      PC.FIND.
          000230
                    103004
                                                            BCC
                                                                       1$
                              000000G
     128
         000232
                    004767
                                                            JSR.
                                                                      PC, ERR4
     129
         000236
                    000167
                              000136
                                                            JMP
                                                                      RE3X
     130
     131
                                                            MATCH THE REGISTER MNEMONIC FROM THE COMMAND LINE AGAINST
     132
133
                                                             THE TABLE OF VALID ADDRESSES.
     134
          000242
                    812799
                                                                                           :NUMBER:OF:TABLE ENTRIES
:R2:-> TABLE:
                              РИРИРИЗ
                                                   1$:
                                                                       #RE3LH,R0
          000246
                    012702
                              000014
                                                            MOV
                                                                      #RE3TBL,R2.
     136
          000252
                    004767
                              000000G
                                                            JSR
                                                                      PC.SCAN.
                                                                                           :MATCH - AGAINST - COMMAND - LINE
     137
          000256
                    103004
                                                            BCC
                                                                      2$
                                                                                           :OK, CONTINUE
          000260
     138
                    004767
                              000000G
                                                             JSR
                                                                      PC, ERR6
     139
                    000167
                              000110
                                                            JMP
                                                                      RE3X
     140
                                                            SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE REGISTER, RI -> ROUTINE ADDRESS, CALL ROUTINE TO SCAN COMMAND LINE FOR LOOP INDICATOR.
     141
     142
     143
     144
                                                            EG. BC>RE-C1 L.
LOOP-FLAG-WILL-BE-SET-IF-THDICATOR IS PRESENT
JUMP-TO-ROUTINE-TO-LOAD-REGISTER.
     145
     146
     147
     148
          000270
                    010167
                              000000G
                                                  2$:
                                                            MOV
                                                                      R1.RTNPT
                                                                                           :SAVE POINTER TO RTH
                                                                      PC, LOOPR
     149
         000274
                    004767
                              000000G
                                                            JSR
                                                                                           :LOOP?
:POINT.TO.ROUTINE
     150
          000300
                    016701
                              000000G
                                                  RE3IH:
                                                            MOV
     151
          000304
                    000171
                              000000
                                                            JMP
                                                                      @(R1)
                                                                                           :EXECUTE ROUTINE
     152
     153
     154
                                                            CONTROL AND STATUS REG #1
     155
     156
          000310
                                                  RE3C1::
     157
          000310
                    016701
                              176420
                                                                      QR$CR1,R1
                                                                                           :GET CSR #1
          000314
                    000406
                                                            BR
                                                                      RE3PUT
                                                                                           :AND PRINT
     160
                                                            CONTROL AND STATUS REG #2
     161
                                                                                         ---
         000316
     162
                                                  RE3G2::
          000316
                    016701
                              176422
                                                            MOV
                                                                      QR$CR2,R1
                                                                                           :GET CSR #2
     164
          000322
                    000403
                                                            BR
                                                                      RE3PUT.
                                                                                           : AND PRINT
     165
166
                                                            LOD-BUS-REG
     167
     168 000324
                                                  RE3LB::
                                                                                          GET LOD BUS REG
     169
         999324
                    016701
                              176424
                                                            MOV
                                                                      QR$LBR,R1
     170 000330
                   000400
                                                            BR
                                                                      RE3PUT.
     172
```

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BOREST- M 0 M1110 27-MAR-80 14:35 PAGE 6-1 Approved For Release 2005/07/12 IA-RDP85-00514R000200020001-3 PRINTED ONCE ?

YES, SKIP

SET_ELAG FOR PRINTED ONCE

POINT TO PRINT LINE

CONVERT VALUE IM RI FOR PR

PRINT ON CONSOLE 000332 032767 000000G · 000000G BIT #ONCE, BASE 175 000340 001011 BNF 1\$ 176 999342 052767 012705 000000G · 000000G 000000G · BIS #ONCE, BASE 000350 #PRINT, R5 MOV 178 000354 004767 000000G JSR PC . UNPK FOR · PRINTING 179 000360 004767 000000G JSR PC, CONSOL 180 181 000364 832767 000000G-000000G-1\$: BIT #LOOP,BASE :REPEAT ? 182 000372 001402 BEQ. RE3X :NO-183 000374 000167 177700 JMP RE3IN. : AND REPEAT 185 000400 RE3X: 186 000400 000406 942767 994767 000000G 000000G BIC ;CLEAR PRINT CONTROL FLAG #ONCE, BASE: 187 000000G JSR PC,KILL. BCEXX. :KILL AST 000412 000167 000000G 189 190 191 RESET-HOR 192 193 194 000416 RS3:: 195 000416 005046 012746 CLR: -(SP):CLEAR · NO · BITS · IN · CSR1 000420 000010 MOV #Q\$RSET,-(SP) :SET-RESET-:CHANGE-CSR1 FW. 000424 000430 197 004767 000000G JSR MOV PC.CSR1 FW. 198 B12746 000010 CLEAR RESET. DON'T SET ANYTHING #Q\$RSET,-(SP) FW. 199 000434 005046 CLR -(SP) FW. 200 000436 004767 000000G JSR PC.CSR1 : CHANGE CSR1 201 000442 202 203 FW-000167 000000G JMP BCEXX-000001 .END

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BCREST- MACRO-M1110 27-MAR-80 14:35 PAGE-6-2-
SYMBOL TABLE
                                                Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
ALUCKE = . 040000
                                   BYTE4 = 000004
                                                                      BYTE91=-000133
                                                                                                                 = · 000144
                                                                                                                                           D#DL
                                                                                                                                                   = 000043
ALUOE -- 004000
A01 -- 010000
                                  BYTE40= 000050
BYTE41= 000051
                                                                      BYTE92= 000134
                                                                                                        ONCE: = ******** GX:
                                                                                                                                           Q$QLA.=.000053
                                                                      BYTE93 = . 000135
                                                                                                                 = ***** GX_
                                                                                                        PACK -
                                                                                                                                           0$01.8; = *00005***
0$018 = 000001
0$0W = 000042
BASE · = · ***** GX
                                   BYTE42= 0000052
                                                                                                                 = 0000010
                                                                      BYTE94= 000136
                                                                                                        PLB.
                                                                                                                                  · -
BOEXX: = : ****** GX
                                   BYTE43 = · 000053
                                                                      BYTE95 = . 000137
                                                                                                                 = 0000020
                                  BYTE44= 000054
BYTE45= 000055
BINUD · = · ******* LX
                                                                      BYTE96= 000140
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                                                                                                        PLD.
                                                                                                                 = -000030
                                                                                                                                           Q$RDCD= 000005
                                                                      BYTE97 - . 000141
                                                                                                        PLRWR · = · 000200
                                                                                                                                           Q$RDMD=-000006
                                   BYTE46= 000056
                                                                     BYTE98= 000142
BYTE99= 000143
                                                                                                        PLR.EN= 000200
                                                                                                                                           Q$REBK = .001000
Q$RNC - = .006000
Q$RSC - = .004000
                                   BYTE47=-000057
BYTE48=-000060
BYTE49=-000061
                                                                                                        PRINT = ****** GX**
QR$CR1= 176420
BIT10 = 002000
                                                                     BYTVAL=-000144
CBKALL=-001000
CBKCLK=-000400
BIT11 = 004000
                                                                                                        QR$CR2= 176422
                                                                                                                                           Q$RSET- 000010
BIT12 -- 010000
BIT13 -- 020000
                                   BYTE5 = 000005
                                                                                                        QR$LBR= 176424
                                                                                                                                           Q$SM =
                                                                                                                                                       100000
                                   BYTE50=-000062
BYTE51=-000063
                                                                      CNOBRE = 100000
                                                                                                        Q$ATTN= 000100
Q$BCL = 000001
Q$CCCP= 000040
                                                                                                                                           O$SP
                                                                                                                                                   = 000120
BIT14 = 040000
                                                                                                                                           Q$SP2 = 000340
RE3 000224RG
                                                                      CONSOL = · ***** GX
CPCCEN = · 010000
        = 100000
= 000004
                                   BYTE52= 000064
                                                                                                                                                                        002
BIT2.
                                   BYTE53=-000065
                                                                      CPREAD= 040000
                                                                                                        Q$CHB - = - 000400
                                                                                                                                           RE3C1
                                                                                                                                                                        002.
                                                                                                                                                       000310RG
         = 000010
BIT3
                                   BYTE54= 0000066
                                                                      CPWRTE = . 020000
                                                                                                        Q$CHRL= 000200
                                                                                                                                                       000316RG
                                                                                                                                           REBC2.
                                                                                                                                                                        002
         = 000020
                                   BYTE55= 000067
                                                                                                        Q$CLR·=·000040
Q$CHC·=·030000
Q$CP·=·000060
                                                                      CSADRD= 000004
CSEQCI= 100000
                                                                                                                                           RE3IN
                                                                                                                                                       999399R
                                                                                                                                                                        992
        = 000040
BIT5
                                   BYTE56= 000070
                                                                                                                                                      1000324RG
                                                                                                                                           RE3LB
                                                                                                                                                                        002
         = 000100
                                                                     CSOE = 000040
CSR1 = ****** GX
                                   8YTE57= 0000071
8YTE58= 000072
BIT6
                                                                                                                                           RE3LN = _000003, G
         = .000200
                                                                                                        Q$CPCC= 000010
                                                                                                                                           RE3PUT
                                                                                                                                                      000332P
                                                                                                                                                                        002.
         = 000400
                                   BYTE59= 000073
                                                                      CSWRTE = - 000100
                                                                                                        Q$CP2.=.000260
Q$CSC.=.010000
                                                                                                                                           RE3TBL
                                                                                                                                                      000014RG
                                                                                                                                                                        002
                                  BYTE6 = 0000074
BYTE60= 000074
BYTE61= 000075
        = 001000
PTIM
                                                                      DBR.RD= 000001
                                                                                                                                           RE3X
                                                                                                                                                       000400R
BYTE0 = 000000
                                                                      DB$CPP=-001457
DB$SPT=-000026
                                                                                                        Q$CSEL = . 000360
                                                                                                                                           RGQ.EM; 000200
RGQ.VA≌ 020000
BYTE1 = 000001
                                                                                                        Q$CSET=-000002
Q$CSP-=-020000
Q$DMA-=-000001
BYTE10= 000012
BYTE11= 000013
                                                                      DB$TPC=-000023
DISPGS=-100000
                                   BYTE62= 000076
                                                                                                                                           RS3
                                                                                                                                                       000416RG
                                                                                                                                                                        002
                                   BYTE63= 000077
BYTE64= 000100
                                                                                                                                           RTNPT: =: ******** GX:
SCAN =: ******** GX:
BYTE12= 000014
                                                                      DMAAWR= 000005
DMARRD= 000003
                                                                                                        Q$ENBK = . 040000
BYTE13= 000015
BYTE14= 000016
BYTE15= 000017
                                   BYTE65= 000101
                                                                                                        Q$ENOP=.020000
                                                                                                                                           SEQ.CI= 000010
                                   BYTE66= 000102
BYTE67= 000103
                                                                      DMARWR = . 000004
                                                                                                        Q$FAL = 004000
Q$FC = 000045
                                                                                                                                                       000030RG
                                                                                                                                           ST3
                                                                                                                                                                        ดดว
                                                                     ENBR = 010000
ERR4 = ********* GX
                                                                                                                                           ST301
ST302
                                                                                                                                                       000150RG
                                                                                                                                                                        002
BYTE16= 000020
                                   BYTE68= 000104
                                                                                                        Q$FO = 000044
Q$FP = 000046
Q$HBF = 000002
                                                                                                                                                       000160RG
                                                                                                                                                                        002
                                   BYTE69= 000105
BYTE17= 000021
                                                                      ERR5
                                                                             =·******* GX
                                                                                                                                           ST3IN-
                                                                                                                                                       000140R
                                                                                                                                                                        002
BYTE18=-000022
BYTE19=-000023
BYTE2-=-000002
                                   BYTE7 = 0000007
                                                                      ERR6
                                                                              = · ******* GX ·
                                                                                                                                           ST3LB
                                                                                                                                                       000170RG
                                                                                                                                                                        002
                                   BYTE70= 000106
BYTE71= 000107
BYTE72= 000110
                                                                      FIND
                                                                              = · жжжжжж GX
                                                                                                        Q$ICP -- 000006
                                                                                                                                           ST3LN-
                                                                                                                                                      000003 G
                                                                      KILL.
                                                                             = - жокококож GX
                                                                                                        Q$IHB - = -000003
                                                                                                                                                       000200R
                                                                                                                                           ST3LP
                                                                                                                                                                        992...
BYTE20= 000024
                                                                      LOC.EN= 000100
LOC.WA= 040000
LOC.WB= 100000
                                                                                                        Q$IHRL= 000002
                                                                                                                                           ST3TBL
                                                                                                                                                       000000RG
                                                                                                                                                                        002
BYTE21=-000025
BYTE22=-000026
                                   BYTE73= 000111
                                                                                                        Q$IMRP=-000007
Q$LBD-=-001000
Q$LBDP=-001001
                                                                                                                                                       000214R
                                                                                                                                                                        002
                                                                                                                                           ST3X
                                   BYTE74= 000112
BYTE75= 000113
                                                                                                                                           S$CLR -=
                                                                                                                                                      000000
BYTE23= 000027
                                                                      LOOP: = : ******** GX:
LOOPR : = : ******* GX:
                                                                                                                                                  = · 000001
= · 000005
                                                                                                                                           SSLA
                                                                                                                                                                      ..
                                   BYTE76=-000114
BYTE77=-000115
BYTE24= 000030
                                                                                                        Q$LBP - - 000001
                                                                                                                                           S$QB
BYTE25= 000031
BYTE26= 000032
                                                                      MAREN 1 = - 000001
                                                                                                        Q$LDCD= 000003
Q$LDMD= 000004
                                                                                                                                                                   -
                                                                                                                                           S$OR
                                                                                                                                                      000006
                                   BYTE78= 000116
                                                                      MAREH2 = 004000
                                                                                                                                           S$QX
                                                                                                                                                    = 000004
BYTE27= · 000033
                                                                      MARLOD= 010000
MAROUT= 000002
                                   BYTE79=-000117
BYTE8 =-000010
                                                                                                        Q$LDPP= 002000
                                                                                                                                           S#SR
                                                                                                                                                    = 000007
BYTE28= 000034
                                                                                                        Q$LHP - = - 010000
                                                                                                                                                    = 0000010
                                                                                                                                           S$S1
BYTE29= 0000035
BYTE3 = 000003
                                   BYTE80 = . 000120
                                                                      MAR.LO= 002000
                                                                                                        Q$MNC = 140000
Q$MR = 000052
                                                                                                                                                    = 000014 --
                                                                                                                                           S$S2
                                   BYTE81=-000121
                                                                      MAR.OU= 000040
                                                                                                                                           TD$CTR= 176370
BYTE30=.000036
                                   BYTE82=-000122
                                                                      MBKALL = . 001000
MBKCLK = . 000400
                                                                                                        Q$MRP - = - 000040
                                                                                                                                           TD$CTW= 176360
TD$INL= 004000
BYTE31= 000037
                                   BYTE83= 000123
                                                                                                        Q$MRP2= 000040
Q$MRP2= 000240
Q$MSC = 040000
Q$MSET= 000004
Q$MSP = 100000
BYTE32= 000040
BYTE33= 000041
                                   BYTE84= 000124
                                                                      MMADRD = . 000100
                                                                                                                                           TD$MEM= 000270
                                                                      MMLEFT= 000002
                                   BYTE95 - 000125
                                                                                                                                            TD$0AR= 176344
BYTE34= 000042
                                   BYTE86= 000126
                                                                      MMOE - - 000004
                                                                                                                                            TD$OTR= 176346
BYTE35= 000043
                                   BYTE87= 000127
                                                                      MMWRTE = 000010
                                                                                                        Q$NCLK= 176000
                                                                                                                                            TD$QRD=.000274
                                   BYTE88= 000130
BYTF36= : 000044
                                                                      MNOBRE = 100000
                                                                                                                = 000100
                                                                                                                                           TD$$U_$_126376777746747
YD$TAR***197637274774674
                                                                                                        OSPP.
BYTE37= 000045
                                                                     MREN1 = 000001
MREN2 = 020000
MSYN = 000040
                                  BYTE89 = 000131
BYTE9 = 000011
                                                                                                        Q$PPSW= 000320
BYTE38 - 000046
                                                                                                        Q$PP2 - - 000300
Q$QHLT - 000013
                                                                                                                                           TD$TAW= 17,6362,,
BYTE39= 000047
                                   BYTE90= 000132
                                                                                                                                            TD$TDR=-176374
                                                Approved For Release 2005/07/12
                                                                                            CIA-RDP85-00514R000200020001-3
```

```
BCREST- M
                  0.M1110 27-MAR-80 14:35 PAGE 6-3
SYMBOL: TA
                                                    Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
TD$TDW= 176364
                                      T$RNB - = - 000040
                                                                            WORD23=-000056
                                                                                                                  WORD5 = 0000012
                                                                                                                                                        WORD76=-000230
WORD77=-000232
WORD78=-000234
T$AD· = 000020
                                      T$RSET= 040000
                                                                            WORD24=-000060
                                                                                                                  WORD50=.000144
T$8A · ≈ · 000002
                                      T$SC∙
                                               = 0000022
                                                                            WORD25= 000062
                                                                                                                  WORD51= 000146
T$BD - - 000010
                                      T$SCLK=-020000
                                                                            WORD26=.000064
                                                                                                                  WORD52≈ 000150
                                                                                                                                                        WORD79= 000236
T$BSO-≕ 100000
                                      T$SEG1 = . 000000
                                                                            WORD27= 000066
                                                                                                                  WORD53= 000152
                                                                                                                                                        WORD8 = 000020
WORD80= 000240
WORD81= 000242
T$BT: =:000020
                                      T$SEG2=:000001
                                                                            WORD28= 000070
                                                                                                                  WORD54= 000154
T$BTAR= 000030
                                                                            WORD29=-000072-
WORD3_=-000006
                                      T$SEG3=-0000002
T$BTHR=.000030
T$BTD.=.002000
T$CLK.=.002000
T$CLK.=.002000
T$DISK=.000200
T$DRD.=.000004
                                                                                                                  WORD55= 000156
WORD56= 000160
                                      T$SO· =·000001
                                                                                                                                                        WORD82= 000244
                                      T$UBUS= 100000
                                                                            WORD30= 000074
                                                                                                                  WORD57=-000162
                                                                                                                                                        WORD83=-000246
WORD84=-000250
WORD85=-000252
                                      T$1CLK=-000400
                                                                            WORD31= 000076
WORD32= 000100
                                                                                                                  WORD58= 000164
                                      T$10EN = 000020
UBD: IN = 000020
UNPK = ********** GX:
WORD0 = 000000
WORD1 = 000002
                                                                                                                  WORD59= 000166
WORD6 = 000014
                                                                            WORD33=-000102
                                                                                                                                                        WORD86= 000254
WORD87= 000256
WORD88= 000260
T$EMEM= . 010000
                                                                            WORD34= 000104
WORD35= 000106
                                                                                                                  WORD60= 000170
T$FSAA= . 000000
                                                                                                                  WORD61=-000172
T$FSAB= 000004
                                                                            WORD36--000110
                                                                                                                  WDRD62= 000174
WDRD63= 000176
                                                                                                                                                        WORD89= 000262
T$FSAC=-000014
T$FSB2=-000010
T$IB- =-000026
                                      WORD10= 0000024
                                                                            WORD37=-000112
WORD38=-000114
                                                                                                                                                        WORD9 - 000022
                                      WORD11=-000026
                                                                                                                                                        WORD9 = 000022
WORD90= 000264
WORD91= 000266
                                                                                                                  WORD64= 000200
                                      WORD12= 000030
WORD13= 000032
WORD14= 000034
                                                                            WORD39= 000116
                                                                                                                  WORD65=-000202
WORD66=-000204
WORD67=-000206
T$IBAR= 000024
                                                                            WORD4 = 000010
WORD40= 000120
WORD41= 000122
                                                                                                                                                        WORD92= 000270
WORD93= 000272
T$18E - - 020000
T$18F - 040000
                                      WORD15= 000036
WORD16= 000040
WORD17= 000042
                                                                                                                  WORD68= 000210
WORD69= 000212
WORD7 = 000016
                                                                                                                                                        WORD94= 000274
T$ICD - - 000040
                                                                            WORD42= 000124
                                                                                                                                                        WORD95= 000276
WORD96= 000300
WORD97= 000302
T$MODE=-004000
T$OB---0040036
T$OBE---004000
                                                                            WORD43= 000126
                                                                            WORD44= 000130
                                      WORD18= 000044
                                                                                                                  WORD70-000214
                                      WORD19= 000046
WORD2 = 000004
                                                                            WORD45= 000132
                                                                                                                  WORD71= 000216
WORD72= 000220
                                                                                                                                                        WORD98= 000304
T$0BF = 010000
                                                                            WORD46=-000134
                                                                                                                                                        WORD99-000306
T$0BRA= 000034
T$0BWA= 000032
                                      WORD20 = . 000050
                                                                            WORD47= 000136
                                                                                                                  WORD72=:000220
WORD73=:000222
WORD74=:000224
                                                                                                                                                        WRDVAL = 000310
XTREAD = 001000
                                      WORD21=-000052
WORD22=-000054
                                                                            WORD48= 000140
T$0UTA= 100000
                                                                            WORD49= 000142
                                                                                                                  WORD75= 000226
                                                                                                                                                        XTWRTE = . 000400
T$RBD0=-000200
 . ABS:
             аааааа
                              000
             000000
                              001
BCREST.
            000446
                              002
ERRORS DETECTED:
                            0
VARIUHL MEMORY USED: 3196 WORDS (113 PAGES)
DYNAMIC MEMORY: 3860 WORDS (14 PAGES)
ELAPSED TIME: 00:00:42
BCREST BCREST - SP-500 (17)
```

BCREST, BCREST/-SP=[20,1]IM,[20,1]BCREST

and the same

.TITLE - PPS - PSECT - PPS -

HARDWARE QUERY RESOLVER "MANUAL" DEBUGGING AIDS PIPELINE PROCESSORS

PARSE THE COMMAND LINE AND TRANSFER CONTROL TO ONE OF THE PPS SUB-MODULES OR BACK TO WANTAL CONTROL COULD HAVE BEEN PASSED TO PPS IN ONE OF THREE WAYS:

1. FROM WAIN IF PPS WAS SELECTED AS THE FIRST PROCESSOR UPON ENTRY TO THE PROGRAM > PP LD QW 0

- FROM-QMAIN-IF-PPS-WAS-SELECTED-FROM-ONE OF QMAIN'S OTHER SUB-MODULES

 CP>PP.LD.QW.0

 3. ON RETURN FROM ONE OF PPS1S SUB-MODULES

PPS-PARSES-AT-THE-SECOND-LEVEL-OF-CONTROL-(SEE-NOTES AT-CMAIN-ON-LEVELS-OF-CONTROL). IN-THE-EXAMPLES-ABOVE, PPS-WOULD-PARSE-'LD' AND-TRANSFER-CONTROL-TO-THE-PPS-SUB-MODULE-PPLD: IF-PPS-SHOULD-ENCOUNTER-A-STRING-WHICH-IS-NOT-A-VALID-COMMAND-MNEMONIC, PPS-CONSIDERS-THE-STRING-TO-BE-A-PROCESSOR-MNEMONIC-AND-RETURNS-CONTROL-TO-QMAIN. EG: PPS-CP-ID-CS-A

BE A-PRULESSUK-IMEDIOTIC-HID RESOLUTION OF THE PROPERTY OF IS NOT A-VALID-PPS (SECOND LEVEL) COMMAND.

THE STRING (CP* IS NOT A-VALID-PPS (SECOND LEVEL) COMMAND.

PPS RETURNS CONTROL TO QMAIN WHICH IN TURN WILL TRANSFER.

PPS·SUB-MODULES:

PPLD: LOAD MEMORIES:
PPR: PRINT: MEMORY: CONTENTS:
PPREST: ALL: OTHER: PPS: COMMANDS

.MCALL · WTSE\$S.CLEF\$S.

```
PPS- --- MACRO M1110 27-MAR-80 15:26 PAGE 6
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
      40
41
42
43
44
45
46
                                                              TABLE OF PPS COMMAND MNEMONICS AND THEIR ASSOCIATED
                                                              ROUTINE - ADDRESSES -
          000000
                                                   PPTBL:
          000000
000002
000004
      47
48
                                   124
                                                              .ASCII
                                                                        /ST/
ST4
/RE/
                                                                                                      :STORE · INTO · A · REG
                    000000G
122
                                                              .WORD
      49
50
                                   105
                                                              .ASCII
                                                                                                      ; READ FROM A REG
          000006
                    000000G
                                                              .WORD
.ASCII
.WORD
                                                                        RE4
      51
52
53
54
          000010
000012
                        114
                                   104
                                                                        /LD/
                                                                                                      :LOAD · MEMORY ·
                    000000G
                                                                       LD4
          000014
                                   122
                        128
                                                              .ASCII
                                                                                                      :PRINT.FROM.MEMORY.
          000016
                    000000G
                                                              .WORD
                                                                        PPPR4
      55
55
55
55
55
56
61
62
64
65
          000020
                                   122
                                                              .ASCII
                                                                       /ER/
ER4
                                                                                                      :MEMORY-ERASE
                    300000G
          000022
                                                              .WORD
          000024
                        120
                                   123
                                                              .ASCII
                                                                        ZPS/
                                                                                                      : PAGE - SWITCH
          000026
                    000000G
                                                              .WORD
          000030
000032
                                   114
                                                              .ASCII
                                                                       /CL/
CL4
                    000000G
000007
                                                                                                      :CALL . QR . LOADER
                                                              .WORD
                                                   PPHUM
                                                                        <.-PPTBL>/4
                                                             CODE FOR MEMORY SELECTION
          000034
                    000000
                                                   CODE::
                                                              .WORD
```

```
PPS-
              0 M1110 27-MAR-80 15:26 PAGE 7
                                      Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
      68
      69
     70
71
72
                                                        PPS-ROUTINES
      73
                                               PPS::
                                                                                                                THE WATER THE THE WAY
         000036
         000036
                                                                 FIND
                                                        CALL
                                                                                              :LOCATE THE COMMAND IN THE COMMAND LINE
      75
         000042
                   103003
                                                                                              OK, CONTINUE
      76
77
         999944
                                                                 ERR3
                                                        CALL
         000050
                   000422
                                                        BR
                                                                 PPSXX
         000052
                   022700
                            000002
                                                        CMP
                                               15:
                                                                  #2,R0
                                                                                              ;COMMANDS.ARE.2.CHARS
         000056
                                                        BEQ
                                                                  2$
      80
         000060
                                                                  ERR8
                   000414
      81
         000064
                                                        BR
                                                                  PPSXX-
                                                                                              :TRY-AGAIN
      82
      83
         000066
                   012700
                                                                  #PPHUM, RØ
                            000007
                                               2$:
                                                        MOV-
                                                                                              :R0 = NUMBER OF COMMANDS
:R2 -> TABLE OF COMMAND MNEMONICS
:FIND MATCH IN TABLE
      84
         000072
000076
                   012702
                                                        MOV.
                                                                  #PPTBL,R2
      85
                                                        CALL
                                                                  SCAN
      86
         000102
                   103003
                                                                                              OK, CONTINUE.
                                                        BCC
                                                                  3$
      87
         000104
                                                                  ERR12
                                                        CALL
      88
         000110
                   000402
                                                                  PPSXX
                                                                                              :TRY-AGAIN
      89
      90
                                                        JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
      91
92-000112- 000171
                            000000
                                               3$:
                                                        JMP
                                                                  @(R1)
      94
      95
96
                                                        LOCAL PPS LOOP: INCLUDE PROMPT FOR PPS COMMAND.
         000116
      99
         000116
                   012767
                            050120
                                     000000C
                                                        MOV-
                                                                  #"PP.GCMBLK+G.DPRM+2
                                                                                              ; MOVE · PPS · NAME · TO · GCM · BLOCK ·
     100
         000124
                                                        CALL
                                                                  GCONLY
                                                                                              : PROMPT
     101
         000130
                                                                                              :LOCATE · THE · COMMAND · IN · THE · COMMAND · L INE ·
                                                        CALL
                                                                  FIND
         000134
                   103003
                                                        BCC -
                                                                  1$
                                                                                              :OK, CONTINUE.
     103 000136
                                                                  ĒŘR3
                                                        CALL
                   000765
     184
         ййй i 42
                                                        BR
                                                                  PPSXX
         000144
                   022700
     105
                            000002
                                                        CMP
                                               1$:
                                                                  #2,R0
                                                                                              :COMMANDS - ARE - 2 - CHARS
     106
         000150
                   001403
                                                        BEO
                                                                  2$
     107
         000152
                                                                  ERR8
                                                         CALL
     108 000156
                   000757
                                                                                              :TRY-AGAIN
     110
         000160
                   012700
                                                        MOV.
                                                                  #PPNUM, RØ
                                                                                              #R0 = NUMBER OF COMMANDS #R2 -> TABLE OF COMMAND MNEMONICS #FIND MATCH IN TABLE
     111
         000164
                   012702
                                                        MOV.
                                                                  #PPTBL,R2
     112.000170
                                                        CALL
                                                                  SCAN
                                                                                                                            I 4 1
         000174
     113
                   103002
                                                        BCC:
                                                                  3$
                                                                                              ;OK, CONTINUE.
     114 000176
                   000167
                                                        JMP
                                                                  COMXX:
                                                                                              RETURN TO 'MAIN'. LOOK FOR PROCESSOR MNEMONIC
     115
     116
                                                        JUMP - TO - THE - ROUTINE - THAT - GOVERNS - THE - COMMAND
     118 000202 000171
                            000000
                                               3$:
                                                        JMP
                                                                  @(R1)
```

```
PPS----MACRO-M!110 27-MAR-80
                                        15:26 PAGE 8 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     120
     121
122
                                                               SET-UP-Q-REGISTER.
     123
     125
         000206
                                                    QREG::
     126
127
         000206
                    012746
                               000200
                                                               MOV.
                                                                          #<PLR:EN>,-(SP)
                                                                                                         BIT PATTERN FOR PLR RIGHT
         000212
                                                               CALL
                                                                                                        #BIT PHILERN FUN FLR KIGHT SER
WRITE TO MRP CONTROL REGISTER
#ENABLE O-REG LOAD
#SEND ENABLE TO MRP
#BIT PATTERN FOR PLR LEFT
                                                                         MRPCR.
     128-000216
                    012746
                                                               MOV.
                                                                          #RGQ.EN.-(SP)
     129 000222
                                                               CALL
     130 000226
                    012746
                               000202
                                                               MOV-
                                                                          #<PLR:EN+MMLEFT>,-(SP)
    131 000232
132 000236
                                                               CALL:
                                                                         MRPCR -
                                                                                                         WRITE TO MRP CONTROL REG : SET O READY TO MRP
                    012746
                               020000
                                                                         #RGQ.VAL,-(SP)
         000242
                                                               CALL.
                                                                         LBMRP .
     134 000246
                    016646
                               000002
                                                              MOV.
                                                                         2(SP),-(SP)
    135
136
                                                                                                         :SEND QEX ADDRESS
         000252
                                                              CALL.
                                                                         LBMRP -
     137
                                                              EXTRA · CLOCK · FOR · PPS ·
    138
139
         000256
000262
                    012746
                               001001
                                                              MOV
                                                                         #<Q$LBD+Q$LBP>,-(SP)
                                                                                                        :CLEAR DRIVE AND PULSE
:CLEAR SELECTION BITS.
     140
                    052716
012746
                               000360
                                                                         #Q$CSEL,(SP)
#Q$NCLK,-(SP)
                                                              BIS.
     141
         000266
                               176000
                                                              MOV
    142
         000272
                    052716
                                                                                                         :SET-NO-CLOCKS
                               000300
                                                              BIS-
                                                                         #Q$PP2,(SP)
    143
         000276
                                                                                                         ;SELECT PPS
                                                              CALL
                                                                         CSR I
    145
         000302
                    012746
                              006000-
                                                                                                        CLEAR PPS NO-CLOCK
                                                              MOV.
                                                                         #Q$RNC,~(SP)
    146
         000306
                    005046
                                                              CLR
         000310
                                                                         -(SP)
                                                              CALL
                                                                         CSR1
    148
    149
                                                              DE-SELECTION
    150
         000314
                   012746
052716
                              001001
                                                              MOV
                                                                         #<Q$LBD+Q$LBP>,-(SP)
                                                                                                        CLEAR DRIVE AND PULSE CLEAR SELECTION BITS
    152 \cdot 000320
                              000360
                                                              BIS.
                                                                         #Q$CSEL,(SP)
    153
154
         000324
                    012746
                              176000
                                                              MOV
                                                                         #Q$NCLK,-(SP)
                                                                                                        :SET-NO-CLOCKS-
         000330
                                                              CALL
    156
157
         000334
                    011666
                              000002
                                                              MOV-
                                                                         (SP).2(SP)
                                                                                                        :MOVE RETURN ADDRESS DOWN STACK
:POTHER TO RETURN ADDRESS
         000340
                    005726
                                                              TST
                                                                         (SP) +
    158 000342
                                                              RETURN
```

PPS-----MACRO-M:110 27-MAR-80 15:26 PAGE-10 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

203 204

000001

.END

```
27-MAR-80. 15:26 PAGE 10-1
Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
SYMBOL TA
ALUCKE = . 040000
                               BYTE42= 000052
                                                             BYTE94= 000136
                                                                                            MREN2 - - 020000
                                                                                                                           .Q$MSET=-000004.
ALUOE - 004000
A01 = 010000
                                                                                            MRPCR = ******** GX***
MSYN = 000040,...
                               BYTE43= 0000053
                                                                                                                      ~ 100000 ± 100000
                                                             BYTE95= 000137
                               BYTE44=:000054
                                                             BYTE96= 000140
                                                                                                                           Q$NCLK= 176000
BITVAL = . 000000
                               BYTE45= 000055
                                                             BYTE97 = . 000141
                                                                                                    = · 999144
                                                                                                                           O¢PP
                                                                                            N.
                                                                                                                                 = 000100
BIT0 = 000001
BIT1 = 000002
                               BYTE46=-000056
BYTE47=-000057
                                                             BYTE98= 000142
                                                                                                    - 000010
                                                                                                                           Q$PPSW= 000320
                                                             BYTE99= 000143
                                                                                            PLC.
                                                                                                    - 000020
                                                                                                                           Q$PP2 - = - 000300
BIT10
                               BYTE48=:000060
                                                             BYTVAL = . 000144
                                                                                            PLD.
                                                                                                    = -000030
                                                                                                                           Q$QHLT= 000013
                               BYTE49= 0000061
BYTE5 = 000005
BIT11 = 004000
                                                              CBKALL= 001000
                                                                                            PLRWR - = - 000200
                                                                                                                           Q$QL = 000043
Q$QLA = 000053
BIT12 - 010000
                                                             CBKCLK= · 000400
                                                                                            PLR:EN= 000200
BIT13 = 020000
                               BYTE50 = . 000062
                                                                    = · ****** GX
                                                             CL4
                                                                                            PPNUM - - 000007
                                                                                                                           Q$QLB · = · 000054
BIT14 = 040000
BIT15 = 100000
                               BYTE51= 000063
                                                             PPPR4 = ******* GX
                                                                                                                     Q$QLR · = · 000001
002 · Q$QW = · 000042
                               BYTE52= 000064
                                                                                            PPS.
                                                                                                      000036RG
3IT2 - 000004
                               BYTE53 = . 000065
                                                                                            PPSXX-
                                                                                                      000116RG
                                                                                                                      002 · Q$RDCD = · 000005
        = 0000010
                               BYTE54= 000066
                                                                                            PPTBL -
                                                                                                      000000R
                                                                                                                          Q$RDMD= 000006
ait4
        --000020
                               BYTE55=-000067
                                                              CPREAD = . 040000
                                                                                                                          Q$RBK= 001000
Q$RNC = 006000
Q$R$C = 004000
Q$R$ET= 000010
TQ$SM = 100000
Q$SP = 000120
                                                                                            PS4
                                                                                                    = ⋅ *********** GX
        = . 000040
BIT5
                               BYTE56= 000070
BYTE57= 000071
                                                              CPWRTE = - 020000
                                                                                            OREG.
                                                                                                      000206RG
                                                                                                                      002
        = 000100
                                                             CSADRD = 000004
BIT6
                                                                                            QR$CR1=:176420
        = 000200
                               BYTE58 = . 000072
                                                              CSEQCI = 100000
                                                                                            OR$CR2=:176422
OR$LBR=-176424
        = · 000400
= · 001000
                                                             CSOE - - 000040
CSR1 = - *********** GX
                               BYTE59= 0000073
 31T8
BIT9
                               BYTE6 - 000006
                                                                                            Q$ATTN= 000100
BYTE0 = 000000
                                                                                            Q$BCL - = .000001
Q$CCCP = .000040
                               BYTE60= 000074
BYTE61= 000075
                                                              CSWRTE=-000100
                                                                                                                           Q$SP2.=.000340
BYTE1 = 000001
                                                              DBR.RD= 000001
                                                                                                                           RE4
                               BYTE62= 000076
                                                                                                                           RGQ.EN= 000200
BYTE10= 0000012
                                                              DB$CPP=-001457
                                                                                            Q$CHB - = - 000400
BYTE11= 0000013
                               BYTE63 = . 000077
BYTE64 = . 000100
                                                              DB$SPT= 000026
                                                                                            Q$CHRL= 000200
                                                                                                                           RGQ.VA= 020000
BYTE12= 000014
                                                             DB$TPC=-000023
DISPGS=-100000
                                                                                                                           SCAN
                                                                                            Q$CLR - = - 000040
BYTE13= 0000015
                               BYTE65= 000101
                                                                                            Q$CNC - 030000
                                                                                                                           SEQ.CI=-000010
BYTE14= 000016
                               BYTE66=-000102
BYTE67=-000103
                                                              DMAAWR = . 000005
                                                                                            Q$CP
                                                                                                   = . 000060
                                                                                                                           STOP
                                                                                                                                   000344RG:
= ******** GX
                                                                                                                                                    BB2.
BYTE15= 000017
                                                             DMARRD = . 000003
                                                                                            Q$CPCC= 000010
                                                                                                                           ST4
BYTE16= 000020
                               BYTE68= 000104
                                                                                            Q$CP2 -- 000260
Q$CSC -- 010000
                                                             DMARWR = . 000004
ENBR - = . 010000
                                                                                                                           S$CLR - = - 000000
BYTE17= 000021
                               BYTE69= 000105
                                                                                                                           S$LA
                                                                                                                                 = 0000001
BYTE18= 0000022
                               BYTE7 = 0000007
                                                              ERR12 ·= · ***** GX·
                                                                                            Q$CSEL = . 000360
                                                                                                                                  = 0000005
                                                                                                                           S$08
BYTE19= 000023
                               BYTE70= 000106
                                                             ERR3 = · ******* GX · ERR8 = · ******
                                                                                            Q$CSET= 0000002
                                                                                                                                  = 000006
                                                                                                                           S$0R
BYTE2 - = - 000002
                               BYTE71= 000107
                                                                                            Q$CSP.=.020000
Q$DMA.=.000001
                                                                                                                                  = 000004;
= 000007;
= 000010;
                                                                                                                           S$QX
                                                                    = · ********* GX ·
BYTE20=-000024
                               BYTE72= 000110
                                                              ER4
                                                                                                                           S$SR
BYTE21= 000025
                               BYTE73= 000111
                                                              FIND
                                                                                            Q$ENBK = - 040000
                                                                                                                           S$S 1
BYTE22= 0000026
                               BYTE74= 000112
                                                              GCMBLK = · ****** GX-
                                                                                            Q$ENOP = . 020000
                                                                                                                                  = 000014
                                                                                                                           S$S2
BYTE23= 000027
                                                              GCONLY= ******* GX
                               BYTE75= 000113
                                                                                            Q$FAL = 004000
Q$FC = 000045
                                                                                                                           TD$CTR= 176370
BYTE24=:000030
                               BYTE76=-000114
                                                              G.DPRM= ******** GX
                                                                                                                           TD$CTU= 176360
                                                                                                   = 0000044
BYTE25=:000031
                               BYTE77= 000115
                                                              LBMRP - = · ****** GX
                                                                                                                           TD$INL= 004000
BYTE26= 000032
                                                                     = ****** GX
                               BYTE78= : 000116
                                                                                            Q$FP - 000046
Q$HBF - 000002
                                                             LD4
                                                                                                                            TD$MEM=.7000270
BYTE27= 0000033
                               BYTE79= 000117
                                                              LOC.EN= 000100
                                                                                                                           TD$0AR= 176344
TD$0TR=7176346
9YTE28 = . 000034
                               BYTE8 = .000010
                                                              LOC.WA= 040000
                                                                                            Q$ICP - 000006
£YTE29≈ 000035
                               BYTE80=-000120
                                                              LOC.WB= 100000
                                                                                             Q$IHB·=∙000003
                                                                                                                           TD$QRD= 000274
                                                             MAREN1 = 000001
MAREN2 = 004000
BYTE3 = 000003
                               BYTE81= 000121
                                                                                            Q$IHRL= 000002
Q$IMRP= 000007
                                                                                                                            TD$SW·=·176376
BYTE30= 000036
                               BYTE02=.000122
                                                                                                                           TD$TAR= 176372
BYTE31 = - 000037
                               BYTE83= 000123
                                                              MARLOD = . 010000
                                                                                            Q$LBD - = - 001000
                                                                                                                            TD$TAW= 176362
BYTE32= 000040
                               BYTE84=:000124
                                                                                                                            TD$TDR= 176374
                                                              MAROUT = . 000002
                                                                                             Q$LBDP=-001001
BYTE33= 000041
                               BYTE85= 000125
                                                                                            Q$LBP - = .000001
                                                             MAR.LO= 002000
MAR.OU= 000040
                                                                                                                            TD$TDW≕ 176364
BYTE34= 0000042
                               BYTE86= 000126
                                                                                            Q$LDCD=.000003
                                                                                                                           T$AD = 000020
T$BA = 000002
BYTE35=:000043
                               BYTE87 = . 000127
                                                              MBKALL= 001000
                                                                                            Q$LDMD= 000004
                                                             MBKCLK = 000400
MMADRD = 000100
                                                                                                                           T$BD - 000010
F$BSQ 100000
T$BT - 000020
BYTE36= 900044
                               BYTE88=-000130
                                                                                             Q$LDPP=:002000
BYTE37 = . 000045
                               BYTE89= 000131
                                                                                            Q$LHP = 010000
BYTE38= 000046
                               BYTE9 - 000011
                                                              MMLEFT= 000002
                                                                                             Q$MNC - = 140000
                                                             MMOE - 000004
MMURTE - 000010
MNOBRE - 100000
BYTE39 = . 000047
                               BYTE90=-000132
                                                                                                   = 000052
                                                                                                                            T$BTAR = . 000030
                                                                                            Q$MRP = 000040
Q$MRP2 = 000240
BYTE4 = 000004
                               BYTE91=-000133
BYTE40= 000050
                               BYTE92= 000134
                                                                                                                            T$CD = 0000100
                               BYTE93= 000135
BYTE41 = - 000051
                                          000135 MREN1 = 000001 0$MSC = 040000
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                                                                                                                            T$CLK = 002000
```

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PPS-----MACRO-M1110 27-MAR-80 15:26 PAGE 10-2
SYMBOL TABLE Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
T$DISK=-000200
                                      T$SO· = 0000001
                                                                            WORD29= 0000072
                                                                                                                  WORD53=-000152
                                                                                                                                                        WORD78= 000234
                                                                                                                  WORD53--000154

WORD55--000156

WORD56--000160

WORD57--000162

WORD58--000164

WORD59--000164
                                                                                                                                                        WORD79=-000236
WORD8 =-000020
WORD80=-000240
T$DRD - = - 000004
T$EMEM= - 010000
                                      T$UBUS= 100000
T$1CLK= 000400
                                                                            WORD3 = 000006
WORD30= 000074
T$FSAA= 000000
                                       T$8BEN= 000020
                                                                            WORD31= 000076
T$FSAB= 000004
T$FSAC= 000014
                                      UBD.IN=-000020
WORD0 =-000000
WORD1 =-000002
                                                                            WORD32--000100
                                                                                                                                                        WORD81 = . 000242
                                                                            MORD33= 000102
                                                                                                                                                        WORD82=-000244
WORD83=-000246
T$FSB2= 000010
                                                                            WORD34= 000104
T$IBAR = .000026

T$IBAR = .000024

T$IBF = .04000

T$ICD = .00040
                                      WORD10=-000024
WORD11=-000026
WORD12=-000030
                                                                             WORD35= 000106
                                                                                                                  WORD6 = 000014
                                                                                                                                                        WORD84= 000250
                                                                                                                  WORD60= 0000170
WORD61= 000172
WORD62= 000174
                                                                            WORD36=-000110
WORD37=-000112
                                                                                                                                                        WORD85=-000252
                                                                                                                                                        WORD86=-000254
WORD87=-000256
                                      WORD13=-000032
                                                                             WORD38= 000114
                                      WORD14= 000034
WORD15= 000036
                                                                            WORD39=-000116
                                                                                                                  WORD63=-000176
                                                                                                                                                        WORD88=-000260
T$MODE=-004000
                                                                            WORD4 = 000010
WORD40= 000120
                                                                                                                                                        WORD89=-000262
WORD9 =-000022
                                                                                                                  WORD64= 000200
T$0B: =:000036
T$0BE:=:004000
                                      WORD16= 000040
                                                                                                                  WORD65= 000202
                                                                                                                  WORD65=-000204
WORD67=-000206
                                      WORD17=-000042
                                                                            WORD41 = . 000122
                                                                                                                                                        WORD90 = . 000264
 î$OBF·=·010000
                                      WORD18= 000044
                                                                             WORD42= 000124
                                                                                                                                                        WORD91=-000266
T$0BRA=.000034
T$0BWA=.000032
T$0UTA=.100000
                                      WORD19=-000046
WORD2-=-000004
                                                                             WORD43= 000126
                                                                                                                  WORD68=-000210
                                                                                                                                                         WORD92=-000270
                                                                                                                  WORD69= 000212
WORD7 = 000016
WORD70= 000214
                                                                                                                                                        WORD93=:000272
WORD94=:000274
WORD95=:000276
                                                                            WORD44= 000130
WORD45= 000132
                                      WORD20=-000050
                                      WORD21 = 000050
WORD21 = 000052
WORD22 = 000054
WORD23 = 000056
WORD24 = 000060
                                                                            WORD43--000132
WORD46--000134
WORD47--000136
T$RBD0=.000200
T$RNB - = - 000040
                                                                                                                  WORD71= 000216
                                                                                                                                                        WORD96 = . 000300
T$RSET=-040000
T$SC- =-000022-
T$SCLK=-020000
                                                                            WORD48=-000140
WORD49=-000142
WORD5 =-000012
                                                                                                                  WORD72= 000220
WORD73= 000222
WORD74= 000224
                                                                                                                                                        WORD97= 000302
                                                                                                                                                        WORD98= 000304
                                      WORD25=-000062
                                                                                                                                                        WORD99 = - 000306
 T$SEG1=-000000
                                       WORD26=-000064
                                                                             WORD50= 000144
                                                                                                                  WORD75=-000226
                                                                                                                                                         WRDVAL = . 000310
T$SEG2=-000001
                                      WORD27 = . 000066
                                                                             WORD51= 000146
                                                                                                                  WORD76= 000230
                                                                                                                                                        XTREAD = 001000,
XTURTE = 000400
T$SEG3=:000002
                                      WORD28= 000070
                                                                            WORD52= 000150
                                                                                                                  WORD77=-000232
 . ABS:
             000000
                              000
             000000
                              001
PPS
             999464
                              002
ERRORS DETECTED:
                             0
VIRTUAL MEMORY USED:
                                   3251 WORDS: (-13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:43
PPS, PPS/~SP=[20,1]IM.[20,1]PPS
```

```
PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE-5
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        123,4567890
                                                                              .FITLE - PPLD
.PSECT - PPLD
            000000
                                                                              HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
PIPELINED PROCESSORS: TEST ROUTINES
                                                                              COMMANDS: .
LD LOAD PPS MEMORIES
        11
                                                                              ONCE A COMMAND HAS BBEN EXECUTED (OR AN ERROR ENCOUNTERED).
THIS MODULE RETURNS CONTROL TO THE MODULE PPS AT LOCATION.
        12
13
14
15
       i6
17
18
                                                                    NOTE:
                                                                             THE COMMANDS TO LOAD GEX MEMORIES CANNOT BE USED UNLESS MRP MICROPROGRAM MEMORY AND CP CONTROL STORE HAVE BEEN LOADED VIA THE 'LOADER' PROGRAM, GEX LOADING MAKES USE OF CP DATA MEMORY - THE PREVIOUS CONTENTS OF THAT MEMORY ARE DESTROYED.
       20
21
22
24
25
26
27
28
29
                                                                   **************
       30
31
32
33
34
35
36
                                                                              .MCALL · WTSE$S,CLEF$S
                                                                             \begin{tabular}{lllll} TABLE \cdot OF \cdot VALID \cdot PPS \cdot MEMORY \cdot MNEMONICS \cdot AND \cdot ADDRESSES \cdot OF & THEIR \\ ASSOCIATED \cdot ROUTINES \cdot \\ \end{tabular}
            000000
                                                                LD4TBL::
            000000
                              121
                                           127
                                                                              .ASCII-
                                                                                          /QW/
                                                                                                                                 ;QEX-WIMDOW-MEMORY
       38
39
            000002
                         000322
                                                                              .WORD
                                                                                          LD40W
            0000004
000006
                              121
                                           114
                                                                              .ASCII
                                                                                          ZQLZ
                                                                                                                                 ;QEX-LOCATION-MEMORY
       40
                         0003324
                                                                              .WORD.
                                                                                          LD4QL
       41
            000010
                              186
                                           120
                                                                              .ASCII
                                                                                          /FP/
                                                                                                                                 :FAL . POINTER . MEMORY
                         000662
       42
            000012
                                                                              .WORD
                                                                                          LD4FP
       43
           000014
000016
                              106
                                           103
                                                                             .ASCII.
                                                                                                                                 :FAL · COUNTER · MEMORY ·
       44
                         000672
                                                                                          LD4FC
       45
            000020
                                                                                                                                 ;QLB-REFERENCE-PAGE
                              121
                                           122
                                                                              .ASCII
                                                                                          /QR/
       46
47
            000022
                         001164
                                                                             .WORD
.ASCII.
.WORD
                                                                                          LD40R
           000024
000026
                                           060
                                                                                          /00/
LD400
                                                                                                                                 :QLB-PAGE-0
       48
                         001450
       49
           000030
                              121
                                           061
                                                                              .ASCII
                                                                                          /01/
      50
51
52
53
54
                                                                                                                                 :QLB-PAGE-1
           000032
                         001456
                                                                             .WORD
                                                                                          LD401
                         121
001464
           000034
                                                                                          7027
                                                                                                                                 :QLB-PAGE-2-
           000036
                                                                                          LD402
                                                                             .WORD
                         000010
                                                                LD4LN
                                                                                          <.-LD4TBL>/4
      55
                                                                                                                                                   CONTRACTOR OF THE PROPERTY OF THE PARTY.
      56
57
           000040
                        000002
                                                               CDADD:
QXCHT:
                                                                             .WORD \cdot
                                                    CDADD: WORD 2 :LOAD GEX ADDR/DATA INTO CD :NUMBER OF GEX ADDR/DATA PAIRS

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           000042 000000
```

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PPLD - - - M
                 RO·M1110 27-MAR-80 15:23. PAGE-5-1
                                                  Approved For Release 2005/07/12 LIA-RDP85-00514R000200020001-3
        58 000044
                                                              CDDAT:
                        аввава
                                                                          .WORD
                                                                                      0
                                                                                                                           ;DATA·FIELD·FOR·TRANSFER·TO·CD
;CODE·FOR·MEMORY·SELECTION·_
            000046
                        000000
                                                                          .WORD
       61
62
                                                                          LOAD
       63
64
                                                                          PERFORM THIRD LEVEL PARSING
                                                                          EG. IN THE COMMAND:
PP>LD QW 0
       65
       66
67
                                                                          PARSE THE TOW!
            000050
       69
                                                             LD4::
       70
71
            000050
                                                                                                                           ;LOCATE MEMORY MNEMONIC IN COMMAND LINE :OK, CONTINUE
                                                                          CALL
                                                                                      FIND
            000054
                        103004
                                                                          BCC -
                                                                                      1$
            000056
                                                                          CALL
                                                                                      ERR4
                                                                                                                           MISSING OPERAND:
       73
74
            000062
                        000167
                                    001672
       75
76
77
                                                                          MATCH: THE: MNEMONIC: IN: THE: COMMAND: LINE: AGAINST: THE: TABLE
                                                                          OF VALID MNEMONICS.
        78
            000066
000072
                        012700
                                     000010
                                                              1$:
                                                                          MOV.
                                                                                                                     HUMBER OF TABLE ENTRIËS
POINT TO TABLE
MATCH AGAINST COMMAND LINE
                                                                                      #LD4LN,R0
                        012702
                                     000000'
                                                                          MOV.
                                                                                      #LD4TBL,R2
       80
            000076
                                                                          CALL
                                                                                      SCAN
       81
            000102 · 000104
                        103004
                                                                          BCC -
                                                                                      2$
       82
                                                                                                                          :MATCH WAS MADE
                                                                          CALL
                                                                                      FRR7
                                                                                                                           ; "INVALID MEMORY MNEMONIC:
       83
            000110
                        000167
                                    001644
                                                                                      LD4X
       84
       85
                                                                         SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
       86
       87
                                                                         1. START ADDRESS ONLY: REPEAT PROMPT FOR EACH MEMORY LOCATION FROM THE START ADDRESS FORWARD: NB. END OF MEMORY (AS DETECTED BY THE OMAIN SUBROUTINE PDATA) OR A <a href="https://docs.org/leggen/sepsecond/">CR</a> RESPONSE TO THE PROMPT
       88
       89
       90
       91
                                                                              WILL TERMINATE THE LOAD.
       92
                                                                              PP>LD - DIJ - Ø
       93
94
                                                                              START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF THIS ONE MEMORY LOCATION ONLY.

PP>LD QW 0 L
                                                                             START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE PROMPT AND FILL MEMORY (BETWEEN START AND END, ADDRESSES) WITH THIS VALUE.
       96
97
                                                                             PP>LD-QU-0 7
START-ADDRESS, END-ADDRESS, LOOP INDICATOR, ISSUE ONLY-ONE-PROMPT-AND-LOOP-ON-THE-LOADING-OF-MEMORY-(BETWEEN START-AND-END-ADDRESSES) WITH-THIS-VALUE.
PP>LD-QW-0 7 L
       98
      100
      101
      102
      103
      104
      195
      106
           000114
                       010167
                                    000000G
                                                                         MOV.
                                                                                                                          :SAVE POINTER:
:LOCATE START ADDRESS IN COMMAND LINE
:OK.7CONTINUE
:MISSING OPERAND:
                                                                                     R1,RTHPT
      107
           000120
                                                                         CALL
                                                                                     {\tt FIND}
           000124
                       103004
                                                                         BCC
                                                                                      3$
      109
           000126
                                                                         CALL
                                                                                     ERR4
     110
           000132
                       000167
                                                                         JMP -
                                                                                     LD4X
                                                                                                                          &EXIT
     111
           000136
                                                                         CALL
                                                                                     PACK
                                                                                                                          CONVERT COMMAND LINE VALUE TO BINARY CONVERSION SUCCESSFUL
           000142
                       103004
                                                                         BCC
                                                                                     4$
     113 000144
114 000150
                                                                         CALL
                                                                                     ERR5
                                                                                                                          ; 'INVALID NUMERIC VALUE
                       000167 001604
                                                                          JMP
                                                  Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

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PPLD--- MACRO M1110 27-MAR-80 15:23 PAGE_5-2
                                           Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     116 000154
                    016767
                               000000G 000000G 4±:
                                                                         BINWD, MSTRT.
                                                                                                         :SAVE LOADING START ADDRESS
:SAVE IT TWICE (FOR REFRESH ON LOOP FOR TO
: IN IT END ADDRESS
     117
          000162
                    016767
                               000000G · 000000G
                                                               MOV
                                                                         BINWD, MSTR2
     118
          000170
                    012767
                                          000000G
                                                               MOV
                                                                          #-1,MEND
     119
                                                               START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE), IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
     120
     12 i
     122
     123
     124
          000176
                                                               CALL
                                                                                                         SCAN-COMMAND-LINE:
SOMETHING THERE:
SIGNAL-TO REPEAT-PROMPT:
                                                                         FIND
     125
          000202
                     103004
                                                               BCC.
                                                                         5$
     126
                                                                         #RP,BASE.
          000204
                     052767
                               000000G · 000000G
                                                               BIS
          000212
                     000437
                                                                          9$
                                                                                                         ; JUMP · TO · RTN
     128
     129
          000214
                     122711
                               000114
                                                               CMPB
                                                    5$:
                                                                         #fL,(R1)
                                                                                                         :LOOP · INDICATOR
     130
                     001006
          00022A
                                                                                                         :NO. MUST-BE-UPPER ADDRESS
:SET-END-ADDR = START-ADDR
                                                              BNE .
                                                                         6$
     131
          000222
                     016767
                               000000G · 000000G
                                                                         MSTRT, MEND
                                                               MOV:
          000230
                                                               CALL
                                                                         HANG
                                                                                                         :HOW-TO-STOP-LOOP
:JUMP-TO-RTN-
     133
          000234
                     000426
                                                              BR
                                                                         9$
     134
     135
          000236
                                                    6$:
                                                               CALL
                                                                         PACK
                                                                                                         :CONVERT.UPPER.ADDRESS
     136
          000242
                     103004
                                                               BCC.
                                                                         7$
                                                                                                         :OK, CONTINUE:
:INVALID:NUMERIC
     137
          000244
                                                              CALL
                                                                         ERR5
     138
          000250
                    000167
                               001504
                                                               JMP -
                                                                         LD4X
                                                                                                         ;EXIT
     139
     140
                                                              SAVE END ADDRESS (BINARY)
     141
                                                              CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION-4)
     142
          000254
     143
                    016767
                               000000G 000000G 7$:
                                                              MOV
                                                                         BINWD, MEND
                                                                                                        :SET-UP-END-ADDRESS-
:CHECK-FOR LOOP-INDICATOR
     144
          000262
                                                              CALL
                                                                         FIND
     145
          000266
                     103411
                                                              BOS
                                                                         9$
                                                                                                         :NO·LOOP:
:CORRECT:INDICATOR
     146
          000270
                     122711
                               000114
                                                              CMPB
                                                                         #*L,(R1)
     147
          000274
                    001404
                                                              BED.
                                                                         8$
                                                                                              ;YES, CONTINUE:
:LOOP.OPTION.ERROR
          000276
     148
                                                                         ERR11
                                                              CALL
     i 49
          000302
                    000167
                               001452
                                                               JMP
                                                                         LD4X
     150
          000306
                                                    8$:
                                                              CALL
                                                                         HANG
                                                                                                         :HOW-TO-STOP-LOOP-
     151
     152.000312
                    016701
                               000000G
                                                    9$:
                                                              MOV-
                                                                         RTHPT.R1
                                                                                                         :POINT · TO · ROUTINE
         000316
     153
                    000171
                               000000
                                                                         @(R1)
                                                                                                         :JUMP TO ROUTINE
     154
     155
156
                                                                                                                                        ÷.
                                                              LOAD · QEX · WINDOW · MEMORY
     157
                                                              LOAD · QEX · LOCATION · MEMORY
     158
     159
     160
         000322
                    012767
                               000042
                                       177516
                                                    LD4QW::
                                                              MOV
                                                                         #Q$QW,CODE
                                                                                                         :SET-MEMORY-SELECT-CODE-=-WINDOW-
     16 i
          000330
                    000403
                                                              BR
                                                                         QEX-
     162
         000332
                    012767
                                                    LD4QL::
                                                              MOV
                                                                         #Q$QL,CODE
                                                                                                         :SET-MEMORY-SELECT-CODE-=-LOCATION
     163
     164
          000340
                    016746
                               agggggg.
                                                    OEX:
                                                              MOV.
                                                                         QXHIGH,-(SP)
                                                                                                         SUPPLY UPPER MEMORY LIMIT
     165
         000344
                    016746
                               000000G
                                                              MOV.
                                                                        QXLOW,-(SP)
BUFSET
                                                                                                         :LOWER LIMIT
    166
         000350
                                                              CALL
                                                                                                         :PREPARE · FOR · LOAD
         000354
    167
                    103002
                                                              BCC
                                                                         1$
                                                                                                         OK, CONTINUE
    168
         000356
                    000167
                              001376
                                                              JMP.
                                                                         LD4X
    169
                                           WRITE DATA FOR QEX INTO CP DATA MEMORY, SKIP CD WORDS 0: 1
(RESERVED FOR WRITE FLAG AND TRANSFER COUNT SEE BELOW).

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    170
    171
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PPLD - - - M
               RO M1110 27-MAR-80 15:23 PAGE 5-3
                                           Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                              WRITE OEX DATA: IN THE FORM ADDR DATA ADDR DATA...
WHEN THE LOADING OF CD IS COMPLETED, CALL THE SUBROUTINE OXLOADD WHICH IN TURN STARTS UP THE MICROCODE TO LOAD THE
     172
     173
     175
     176
                                                                                                       :WRITE INTO CD STARTING AT LOC 2:CLEAR GEX ADDR/DATA PAIRS COUNT
     177
          000362
                    012767
                               000002
                                         177450
                                                              MOM
                                                                         #2,CDADD.
     178
                                                                         QXCHT.
          000370
                    005067
                                                              CLR
     179
          000374
                    005046
                                                              CLR
                                                                         - (SP)
                                                                                                        ;START MICROCODE AT 0
          000376
                                                                         SECOS.
     iЯЙ
                                                              CAL
                                                              CLR
     181
          000402
                    005046
                                                                         -(SP)
                                                                                                        :RESET-BR-INHIBIT-
     182
          000404
                                                               CALL
                                                                        CPCR
#377,-(SP)
                     012746
                               000377
     183
          000410
                                                              MOV.
                                                                                                        :SET-MRP-MICRO-ADDRESS-=-X*FF* (JUMP-SELF)
                                                                         SEOMM.
          000414
                                                               CALL
      185
          000420
                     005046
                                                                         -(SP)
                                                                                                        ; RESET · BR · INHIBIT ·
                                                                         MRECR
      186
          000422
                                                               CALL
          000426
                     012767
                                                               MOV
      187
                               001000
                                         :176422
                                                                         #Q$REBK,QR$CR2
                                                                                                        :RE-ARM-INTERRUPTS-
                                                                                                       RE-HRM INTERROFTS
SET SEARCH MODE + ENAI
CLEAR ALL SELECTIONS
CLEAR DRIVE AND PULSE
CLEAR CP NO-CLOCK
     188
          000434
                     012767
                               120000
                                          176422
                                                               MOV.
                                                                         #<Q$SM+Q$ENOP>,QR$CR2
                                                                                                                                ENABLE INTERRUPTS
                                                                         #Q$CSEL,-(SP)
#<Q$LBD+Q$LBP>,(SP)
                     812746
     189
          000442
                               000360
                                                               MOV:
                     052716
052716
          000446
      190
                                                              BIS
                               001001
          000452
                               030000
                                                               BIS.
                                                                         #Q$CMC,(SP)
          000456
                                                              CLR-
                                                                         -(SP)
                                                                                                        ; SET · NOTHING
      192
      193
          000460
                                                               CALL
                                                                         CSR4
      194
                                                                         #RP,BASE
      195
          000464
                     032767
                               000000G · 000000G ·
                                                               BIT
                                                                                                        :REPEAT.PROMPT.?
           000472
                     001430
                                                               BEQ
                                                                         4$
                                                                                                        ;NO
      197
          000474
                                                               CALL
                                                                         PDATA
                                                                                                        :READ DATA FROM COMMAND LINE
                                                                                                        :END.OF.MEMORY - LOAD.QEX:
:<CR> RESPONSE - LOAD.QEX:
:URITE.QEX ADDR:TO.CP.DATA.MEMORY
      198
          000500
                     103421
                                                               BCS.
                                                                         3$
                     102420
                                                               BVS.
      199
          000502
                                                                         3$
      200
          000504
                     016767
                               000000G-177332
                                                               MOV
                                                                         MSTR2,CDDAT
      201
          000512
                                                               CALL
                                                                         LOADED:
                                                                                                        ; LOAD · ONE · WORD ·
                                                                         DATA1.CDDAT
      202-000516
                     016767
                               000000G · 177320
                                                               MOV.
                                                                                                        ; WRITE DEX DATA TO CP DATA MEMORY
      203
          000524
                                                               CAL:
                                                                         LOADCD -
                                                                                                        :COUNT-NUMBER-OF-QEX ADDR/DATA PAIRS :BUMP-LOAD ADDRESS
      204
          000530
                     005267
                                177306
                                                               INC
                                                                         QXCNT.
      205
          000534
                     066767
                               000000G · 000000G
                                                               ADD
                                                                         INCVAL, MSTR2
      206
          000542
                     000754
                                                                                                        REPEAT:
      207
      208
          000544
                                                               CALL
                                                                         LOADQX-
                                                    3$:
                                                                                                        :LOAD QEX
           000550
                     000167
      209
                                                                         LD4X
                                                                                                        :EXIT
     210
211
                                                               PROMPT ONCE . THEN . FILL . MEMORY .
                                                    :
      212
      213
           000554
                                                                         PDATA:
                                                                                                        : PROMPT
                                                                                                        :END OF MEMORY OR ERROR
      214
          000560
                      103401
                                                               BCS -
                                                                         5$
      215
           000562
                      102004
                                                                                                        ; NORMAL CONTINUATION
                                                                         6$
      216
           000564
                                                               CALL
                                                                         LOADQX:
                                                                                                        :LOAD - QEX-
                                                                                                                             🗯 😽 🐞
      217
          000570
                     000167
                               001164
                                                               JMP
                                                                                                        ;WRITE-QEX ADDR-TO-CP DATA-MEMORY-
;LOAD-ONE-WORD-
;WRITE-QEX DATA-TO-CP-DATA-MEMORY-
                               000000G 177242 65:
      218 000574
                                                               MOV.
                     016767
                                                                         MSTR2,CDDAT
      219
          000602
                                                               CALL
                                                                         LOADCD -
           000606
                     016767
                                000000G-177230
                                                               MOV
                                                                         DATA1.CDDAT
      221
          000614
                                                               CALL
                                                                         LOADCD
                     005267
                                                                                                       : INC GEX ADDR/DATA PAIRS COUNT
: ADVANCE: ADDRESS /
THAS TOPPER MEMORY LIMIT BEEN REACHED
      222-000620
                                177216
                                                               INC
                                                                         QXCNT:
           000624
                     066767
                               000000G 000000G
                                                               ADD
                                                                         INCVAL, MSTR2
      224 000632
                     026767
                               000000G · 000000G
                                                               CMP
                                                                         MSTR2, MEND
      225 000640
                     101755
                                                               BLOS
                                                                         6$
                                                                                                        :NO, CONTINUE
     226
227
                                                                         LOADOX
                                                                                                        ;LOAD QEX:
;LOOP ON ?
          000642
                                                               CALL
          000646
                     032767
                               000000G - 000000G -
                                                               BIT
                                                                         #LOOP, BASE
                                           Approved For Release 2005/07/12 : CIA-RDP85-00-747990200020001-3
      228
          000654
                     001372
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PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE-5-4
                                      Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
    229 000656
                  000167
                          001076
                                                        JMP
                                                                                              :ELSE EXIT
    230
231
232
                                                        FAL POINTER MEMORY
    233
                                                        FAL COUNTER MEMORY
    235
    236
         000662.
000670
                  012767
000403
                            000046.
                                      177156
                                               LD4FP::
                                                        MOV
                                                                  #Q$FP,CODE
                                                                                              :SET MEMORY SELECT CODE - POINTER
                                                                  FAL
    238
         000672
                   012767
                            000045
                                                                                              :SÉT∰MÉMORY SELÉCT CODE ≔ COUNTER
                                               LD4FC::
                                                        MOV-
                                                                  #Q$FC,CODE
    249
         000700
                   816746
                            000000G
                                               FAL:
                                                        MOV-
                                                                  FAHIGH,-(SP)
                                                                                              SUPPLY UPPER MEMORY LIMIT
         000704
     241
                                                                  FALOW,-(SP)
BUFSET
                   016746
                            000000G
                                                        MOV.
                                                                                              :COWER-LIMIT
     242
         000710
                                                        CALL
                                                                                              :PREPARE FOR LOAD
:OK, CONTINUE
     243
         000714
                   103002
                                                        BCC
                                                                  1$
     244
         000716
                   000167
                            001036
                                                        .TMP
                                                                  LD4X
                                                                                              :ERROR, EXIT
     245
         000722
000730
     246
                   032767
                            000000G · 000000G
                                              1$:
                                                        BIT
                                                                  #RP,BASE
                                                                                              :REPEAT PROMPT
     247
                   001436
                                                        BEO.
                                                                  5$
                                                                                              : NO. ONCE ONLY
     248
         000732
                                               2$:
                                                        CALL
                                                                  PDATA
                                                                                            READ DATA FROM COMMAND LINE
     249
         000736
                   103401
                                                        BCS
                                                                  3$
                                                                                              : END OF MEMORY
     250
         000740
                   102006
                                                        BVC
                                                                  4$
                                                                                              :NO <CR> RESPONSE, CONTINUE
:VALUE FOR QCL POINTER
     251
         000742
                   012746
                            077777
                                               3$:
                                                        MOV
                                                                  #077777,-(SP)
         000746
000752
     252
                                                        CALL
                                                                  STOP
                                                                                              :LOAD · QCL · POINTER ·
     253
                   000167
                            001002
                                                                  LD4X
     254
    255
256
         000756
                   016746
                            000000G
                                                        MOV.
                                               4$:
                                                                                              :LOAD ADDR INTO OCL POINTER
                                                                 MSTR2,-(SP)
         000762
                                                        CALL
                                                                  STOP
         000766
     257
                  016746
                            177054
                                                        MOV.
                                                                  CODE.-(SP)
                                                                                              :SELECT MEMORY
         000772
                                                        CALL
                                                                  PPCR
                                                                                              :WRITE SELECTION TO CONTROL REG
     259
         000776
                  016746
                            000000G
                                                        MOV.
                                                                  DATA1.-(SP)
                                                                                              :SEND DATA WORD TO FAL MEMORY
    269
         001002
                                                        CALL
                                                                 LBPP
     261
         001006
                  012746
                            000040
                                                        MOV.
                                                                  #Q$CLR,-(SP)
     262
         001012
                                                        CALL
                                                                  PPCR
    264
         001016
                   066767
                            000000G - 000000G
                                                        ADD
                                                                  INCVAL, MSTR2
                                                                                              :BUMP - ADDRESS
     265
         001024
                  000742
                                                        BR
                                                                  2$
     266
    267
                                                        PROMPT ONCE THEN FILL MEMORY
    268
    269 001026
                                                        CALL
                                                                 PDATA:
                                                                                              :PROMPT
    279
         001032
                                                                                          END OF MEMORY

NO (CR) RESPONSE, CONT
VALUE FOR QCL POINTER
LOAD QCL POINTER
                   103401
                                                        BCS
                                                                 6$
    271
         001034
                   102006
                                                                 7$
                                                        BVC
                                                                                                                   CONTINUE
         001036
                  012746
                                               6$:
                                                        MOV.
    273
         001042
                                                        CALL
                                                                 STOP
    274
275
         001046
                   000167
                                                        JMP.
                                                                 LD4X
    276
277
         001052
                  816746
                            BERREAGE
                                               フヰ:
                                                        MOV-
                                                                 MSTR2,-(SP)
                                                                                              :LOAD ADDR INTO OCL POINTER
         001056
                                                        CALL
                                                                 STOP
    278
        001062
                  016746
                                                        MOV.
                                                                 CODE. -(SP)
                                                                                              :SELECT-MEMORY
    279
                                                                                              :SELECT MEMORY:
:WRITE-SELECTION TO CONTROL REG
:SEND-DATA WORD TO FALLMEMORY
        ий тибе
                                                        CALL
                                                                 PPCR
    280
281
         001072
                  016746
                            000000G
                                                        MOV
                                                                  DATA1,-(SP)
        001076
                                                        CALL
                                                                 LBPP
    282.001102.
                  312746
                            000040
                                                        MOV.
                                                                                                                 AND THEFT
                                                                  #Q$CLR,-(SP)
                                                                                              :CLEAR PPS A
    283
        001106
                                                        CALL
                                                                 PPCR
    285
        98
            112.
                           Approved For Release 2005/07/11
                  066767
                                                                         TA-RDP85-00514R0000200020001
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86 001120		000000G-000000G-		CMP ·	MSTR2,MEND	:HAS-UPPER MEMORY-LIMIT-BEEN-REACH
	101751 332767	000000G · 000000G ·		BLOS. BIT.	7\$ #LOOP,BASE.	;NO, CONTINUE.
39 001136		0000000.00000000		BNE -		;LOOP.ON. ;YES, CONTINUE.
		077777		MOV.	8\$ #077777,-(SP) STQP	; VALUE FOR QCL POINTER
91 001144				CALL	STQP LD4X	:LOAD · QCL · POINTER**** · TORON ** ** ** ** ** ** ** ** ** ** ** ** **
92-001150		000604		JMP.	LD4X	REINITIALIZE ADDRESS
93 001154 94 001162		000000G · 000000G ·	OΦ;	MO√. BR	7\$:REINITIALIZE ADDRESS
95	000,00		;	DIX	1 4	
96			;			
97 98				LOAD · Q	LB REFERENCE PAGE	
99					•	
00 001164			ĹD40R::			
01 001164				MOV.	LHHIGH,-(SP)	:SUPPLY-UPPER-MEMORY LIMIT-
02·001170 03 001174	016746	000000G·		MOV:	LHLOW,-(SP)	:LOWER-LIMIT-
03 001174 04 001200	103002			CALL BCC	BUFSET. 1\$	*OK CONTINUE
05 001202		000552		JMP.	LD4X	*SUPPLY-UPPER-MEMORY LIMIT- *LOWER-LIMIT- *PREPARE-FOR-LOAD- *OK, CONTINUE- *ERROR, EXIT-
06			1			
07 001206 08 001214	032767 001 <i>436</i>	. 000000G-000000G-	1\$:	BIT. BEQ.	#RP.BASE	REPEAT PROMPT
00 001214 09 001216	001430		2\$:	CALL	PDATA.	:READ DATA FROM COMMAND 1 INF.
10 001222				BCS.	3\$	>NO, ONCE:ONLY: READ DATA FROM COMMAND LINE: END OF MEMORY: NO CCR RESPONSE, CONTINUE:
11 001224		000047		BVC	4\$:NO: <cr> RESPONSE, CONTINUE:</cr>
12.001226 13.001232	012746	000013	3\$:	MOV CALL	#Q\$QHLT,~(SP) PPCR	;HALT·CODE
14 001236	000167	000516		JMP.	LD4X	
15			;			
16 001242 17 001246	012746	000053	4\$:	MOV.	#Q\$QLA,-(SP)	:ADDRESS · SELECT · FOR · QLB · PAGE ·
18 001246	A16746	ааааааа.		CALL: MOV:	PPCR MSTR2,-(SP)	;SEND·TO·PP·CONTROL·REG· ;ACTUAL·ADDRESS·
19 001256				CALL	LBPP	;SEND.TO.PP.
20 001262	012746	000001		MO V	#Q\$QLR,-(SP)	:SELECT-QLB-REF-MEMORY-
21 001266 22-001272-	016746	aaaaaac		CALL MOV	PPCR	. NOTO HODD FOR MEMORY
23 001276	010140	0000000.		CALL	DATA1(SP) LBPP	;DATA-WORD FOR-MEMORY- ;SEND-DATA TO-PPS-
24			;		••	, , , , , , , , , , , , , , , , , , ,
		000000G-000000G		ADD.	INCVAL, MSTR2	BUMP ADDRESS
26 001310 27	иии742 <i>-</i>			BR	2\$	REPEAT:
21 28 -			;	PROMPT	·ONCE·THEN·FILL·MEMORY·	
29			;			
30 001312			5\$:	GALL.	PDATA.	:PROMPT * **
31 001316 .			· · · · · · · · · · · · · · · · · · ·	BCS+ BVC+	6\$ 7\$:END.OF.MEMORY.
32 00132 0 33 001322		000013	6\$:	MOV.	75 #Q\$QHLT,-(SP)	:NO <cr> RESPONSE, CONTINUE :HALT CODE</cr>
34 001326	012170	000010	·*•	CALL	PPCR	ATTITLE CODE
35 001332-	000167	000422		JMP.	LD4X	and the second s
136 137 001336	010740	000057	: 7\$:	MOV.	#0#0L0 = (CD)	- ABBRECO DEL COT COM ACAMBRAGA
37 001336 38 001342		000003	r⊅:	MUV. CALL.	#Q\$QLA,-(SP) PPCR	ADDRESS SELECT FOR GENTAGES
39 001346	016746	000000G		MOV.	MSTR2,-(SP)	SEND TO PERSON RES ACTUAL ADDRESS
40 001352				CALL	LBPP	:SEND.TO.PP.
41 001356 42:001362:	012746	000001		MOV. CALL:	#Q\$QLR,-(SP) PPCR	;SELECT-QLB-REF-MEMORY-

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PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE-5-6
                                       Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     343 001366
                                                         MOV.
                 016746
                           000000G-----
                                                                  DATA1,-(SP)
                                                                                               :DATA:WORD FOR:MEMORY:
:SEND:DATA TO:PPS:
     344 001372
                                                                  LBPP
                                                         CALL
     345
     346 001376
                   066767
                            000000G - 000000G -
                                                                  INCVAL, MSTR2
                                                         ADD:
                                                                                               :ADVANCE ADDRESS::HAS UPPER MEMORY LIMIT BEEN REACHED:NO. CONTINUE
                   026767
     347
         001404
                            000000G-000000G-
                                                         CMP
                                                                  MSTR2, MEND.
     348
         001412
                   101751
                                                         BLOS
                                                                  7$
     349 001414
                   032767
                            000000G-000000G
                                                         BIT.
                                                                  #LOOP.BASE
                                                                                               :LOOP ON
    350 001422
351 001424
                   001006
                                                                                               #YES, CONTINUE
#HALT:CODE
#WRITE:TO:PPS:CONTROL:REGISTER
                                                         BNE
                                                                  8$
                            000013
                   012746
                                                         MOV.
                                                                  #Q$QHLT,-(SP)
     352.001430
                                                         CALL
                                                                  PPCR
LD4X
     353 001434
                   000167
                            000320
                                                         JMP.
                                                                                               REINITIALIZE ADDRÉSS
     354 001440
355 001446
                   016767
000733
                            000000G.00000G.8$:
                                                         MOV.
                                                                  MSTRT, MSTR2
                                                                                                   357
     358
                                                         LOAD · QLB · PAGES ·
     359
     360
     361
         001450
                                               LD400::
                   012746
     362.001450
                            000000
                                                         MOV
                                                                  #0,-(SP)
                                                                                              ;SELECT PAGE 0
     36\overline{3}
         001454
                   000405
                                                                  PGSEL -
                                                         BR
     364
         001456
                                               LD401::
     365 001456
366 001462
                   012746
                                                                  #1,-(SP)
                                                                                               :SELECT-PAGE-1
                   000402
                                                                  PGSEL:
     367
         001464
                                               LD402::
     368 001464
                   012746
                                                                  #2,-(SP)
                                                         MOV
                                                                                              :SELECT PAGE: 2:
     369
     370
         001470
                                               PGSEL:
                                                        CALL
MOV:
                                                                                              #SELECT-A-QLB-PAGE:
#SUPPLY-UPPER-MEMORY LIMIT:
#LOWER-LIMIT:
                                                                  SELPG.
     371
         001474
                   016746
                            000000G
                                                                  LHHIGH,-(SP)
                                                                  LHLOW, -(SP)
BUFSET
     372 - 001500
                   016746
                            000000G
                                                         MOV-
     373 001504
                                                         CALL
                                                                                              :PREPARE FOR LOAD :
                   103002
     374 001510
                                                         BCC:
                                                                  1 $
     375 001512-
                   000167
                            000242
                                                         JMP
                                                                  LD4X
                                                                                               ¿ERROR, EXIT
     376
     377
         001516
                   032767
                            000000G-000000G-1$:
                                                                                              #RP.BASE
         001524
                   001436
                                                         BEQ.
                                                                  5$
     379 001526
                                                         CALL
                                                                  PDATA:
     380 001532
                   103401
                                                         BCS.
                                                                  3$
                                                                                               : END · OF · MEMORY
     381 001534
                   102006
                                                         BVC
                                                                  4$
                                                                                              :NO-<CR> RESPONSE, CONTINUE:
:HALT-CODE
:WRITE-TO-PPS-CONTROL-REGISTER
     382 001536
                   012746
                            000013
                                                         MOV.
                                                                  #Q$QHLT,-(SP)
         001542
                                                         CALL
                                                                  PPCR
     384 001546
                   000167
                                                                  LD4X
     385
     386
         001552
                  012746
                            000053
                                                         MOV.
                                                                  #Q$QLA,−(SP)
                                               4$:
                                                                                              ADDRESS SELECT FOR OLB PAGE
SEND TO PR CONTROL REG.
ACTUAL ADDRESS
     387
         001556
                                                         CALL
                                                                  PPCR
     388
         001562
                   016746
                            000000G
                                                                  MSTR2,-(SP)
                                                         MOV.
         001566
     389
                                                         CALL
                                                                  LBPP
                                                                                              ;SEND.TO.PP.
;SELECT.QLB.REF.MEMORY.
         001572
     390
                   012746
                            000054
                                                         MOV.
                                                                  #Q$QLB,-(SP)
     391 001576
                                                         CALL
                                                                  PPCR
     392.001602.
                   016746
                            000000G
                                                                  DATA1.-(SP)
                                                                                              :DATA-WORD FOR MEMORY:
:SEND-DATA TO-PPS
     393 001606
                                                         CALL
                                                                  LBPP
     394
    395 001612 066767
                            000000G-000000G-
                                                                  INCVAL,MSTR2
                                                         \mathtt{ADD}
                                                                                               :BUMP · ADDRESS ·
    396 001620
                                                                                              POEDEOT.
                  000742
    397
    398
                                                         PROMPT ONCE THEN FILL MEMORY
    399
                                       Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
```

PPLD - - - M RO:M1110 27-MAR-80.15:23 PAGE:5-7 Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3 400 001622 5\$: GALL PDATA :PROMPT 103401 102006 4й i 001626 BCS -END OF MEMORY CONTINUE HALT CODE 6\$ 402-001630 7\$ 403 001632 012746 000013 MOV. #Q\$QHLT,-(SP) 404 001636 CALL PPCR :WRIJE TO PPS CONTROL REGISTER 405 001642 000167 000112 486 407 001646 #ADDRESS SELECT FOR QLB PAGE #SEND TO PP CONTROL REG #ACTUAL ADDRESS #SEND TO PP 012746 000053 MOV. 7\$: #Q\$QLA,-(SP) 408 001652 CALL PPCR 499 001656 016746 000000G MOV. MSTR2,-(SP) 410 001662 CALL MOV-LBPP 411 001666 012746 #Q\$QLB,−(SP) SELECT QLB MEMORY 000054 412.001672 413 001676 CALL **PPCR** DATA WORD FOR MEMORY 016746 aggaggs. DATA1,-(SP) MOV: 414 001702 CALL LBPP SEND DATA TO PPS 415 416 001706 417 001714 066767 000000G-000000G-ADD INCVAL, MSTR2 ; ADVANCE · ADDRESS · 026767 000000G 000000G CMP MSTR2, MEND ;HAS-UPPER MEMORY-LIMIT-BEEN-REACHED 418 001722 101751 BLOS ; HO, CONTINUE: 7\$ 419 001724 032767 000000G-00000G-BIT #LOOP,BASE 001732 420 001006 ;YES, CONTINUE ;HALT.CODE BNF 8\$ 421 001734 012746 000013 MOV #Q\$QHLT,-(SP) 422.001740 : WRITE TO PPS CONTROL REGISTER CALL PPCR 423 001744 000167 000010 IMP. LD4X 001750 016767 000000G 000000G 8\$: MOV. :REINITIALIZE ADDRESS. MSTRT, MSTR2 425 001756 000733 7\$ 426 427 ----428.001760 LD4X: 429 001760 000040 MOV-#Q\$CLR,-(SP) :CLEAR - PPS :WRITE - TO - CONTROL - REG 430 001764 CALL PPCR 431 001770 042767 000000G · 000000G BIC. #RP,BASE :CLEAR · PROMPT · FLAG 432 - 001776 CALL. KILL ;KILL AST (IF THERE WAS ONE) 002002 000167 000000G **PPSXX**

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PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE-6
                                         Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
     436
     437
                                                           LOAD · QEX · MEMORY ·
     438
     439
                                                           FIRST-WRITE-THE-FLAG-("1" =-WRITE) AND THE TRANSFER-COUNT-
     440
                                                            INTO THE FIRST TWO LOCATIONS IN CP DATA MEMORY.
     441
     442
     443 002006
                                                 LOADQX:
                                                                                                   :ANYTHING TO LOAD:
:NO. SHUT DOWN AND EXIT
          002006
                    005767
                                                                      QXCNT.
     445
         002012
                    001507
                                                            BEQ
                                                                      1$
     446
                                                                                                   :WRITE-FLAG-TO-CD-ADDR-ZERO-
:FLAG-FOR-"WRITE-QEX"
          002014
                                                                      CDADD -
     447
         002020
002026
002032
     448
                    012767
                              000001
                                        176016
                                                            MOV-
                                                                      #1.CDDAT:
                                                                     LOADCD.
                                                            CALL
     449
                                                                      QXCNT, CDDAT
                                                                                                   ; WRITE-QEX ADDR/DATA PAIRS-COUNT-TO-CD-ADDR-1
     450
                    016767
                              176004
                                        176004
     45 i
          002040
                                                            CALL
                                                                      LOADCD:
     452
     453
          002044
                    005046
                                                                      -(SP)
                                                                                                   :CLEAR · NOTHING · IN · CSR1
     454
          002046
                    012746
                              176000
                                                            MOV:
                                                                      #Q$NCLK,+(SP)
                                                                                                   ;SET-NO-CLOCKS-
                                                                      CSR4
     455 002052
                                                            CALL
     456
                    005067
                              176422
                                                                                                   :SET LOAD MODE:
          002056
     457
                                                            SELECT-MEMORY-TO-BE-LOADED-(WINDOW-OR-LOCATION). START-THE-MICROCODE-THAT-DOES-THE-LOADING-OF-THE-QEX.
     458
     459
     460
                                                                                                  ື່;SELECT ໝື້າກ່ວວພ OR LOCATION MEMORY.
     461
          002062
                                                            MOV-
                                                                      CODE,-(SP)
                    016746
     462 · 002066
463 · 002072
                                                            CALL
                                                                      PPCR
                                                            MOV.
                                                                      #1760,-(SP)
                                                                                                    :START-CP-MICROCODE-AT-X:3F0*
                    812746
                              001760
      464
          002076
                                                            CALL
                                                                      SEQCS
     465
          002102
                    005046
                                                            CLR-
                                                                      -(SP)
                                                                                                    :RESET-BR-INHIBIT-
                                                                      CPCR
          002104
002110
     466
                                                            CALL
                                                                      #377,-(SP)
                              000377
                                                            MOM
                                                                                                    ;SET-MRP-MICRO-ADDRESS = X'FF' (JUMP-SELF)
     467
                    012746
          002114
                                                            CALL
                                                                      SEQMM-
      469
          002120
                    005046
                                                            CLR
                                                                      -(SP)
                                                                                                    ; RESET BR · INHIBIT.
     470
          002122
                                                            CALL
                                                                      MRPCR
                    012767
012767
012746
                                                                                                   RE-ARM INTERRUPTS
SET LOAD PPS MODE + ENABLE INTERRUPTS
CLEAR ALL SELECTIONS
     471
          002126
002134
                              001000
                                        176422
                                                            MOV:
                                                                      #0$REBK, QR$CR2
                                                                      #<Q$LDPP+Q$ENOP>,QR$CR2
                              022000
                                                            MOV
      472
                                        176422
          002142
                                                            MOV
                                                                                                   CLEAR DRIVE AND PULSE CLEAR ALL NO-CLOCKS
                                                                      #<Q$LBD+Q$LBP>,(SP)
                    052716
052716
      474 002146
                              001001
                                                            BIS
      475
          002152
002156
                                                                      #Q$NCLK,(SP)
                              176000
                                                            BIS
                                                                      -(SP)
                                                                                                    :SET - NOTHING
      476
                    005046
                                                            CLR
      477
          002160
      478
                                                            WAIT-FOR-INTERRUPT-FROM-CP:
USE-DMA-INTERRUPT-(SEE CP-MICROCODE-FOR-QEX)
      479
      480
      481
      482-002164
                                                            WTSE$S - #EFN.3
      483
      484 002176
                                                            CLEF$S: #EFN.3
      485
      486
                                                            RE-ARM. INTERRUPTS
                                                                                                              ----
      487
                                                                      #<0$SM+0$CHB>,QR$CR2 CLEAR INTERRUPT (USE HIT BUFFER INT)
#<0$SM+0$REBK>,QR$CR2 RE-ARM
                    a12767
012767
                                                            MOV.
      488 002210
                               100400
                                        176422
                                         176422
                                                            MOV.
          002216
002224
                               101000
     489
                    012767
                               160000
                                                                      #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2:;ENABLE
     490
```

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1\$:

492.002232.005046 493.002234.012746.176000 494.002240.495.002244.005067.176422 496.002250.176422 GLR· -(SP)
MOV· #0\$NCLK,-(SP)
CALL· CSR1
CLR· QR\$CR2·
RETURN

:GLEAR NOTHING IN CSR1 :SET NO+CLOCKS

SET LOAD MODE.

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PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE-7
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     498
     499
     500
                                                           LOAD · CP · DATA MEMORY
     501
     502
     503
         002252
                                                 LOADCD:
         002252
                   012767
                             000003
                                        176424
                                                           MOV
                                                                     #Q$LDCD,QR$LBR
                                                                     #Q$LDCD,QR$LBR ;MOVE ATTN CODE TO LOD BUS REG
#<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2.;SET ATTN CODE READY
QR$CR2.R1 ;READ CSR2
     505 002260
                   012767
                              120100
                                       176422
                                                           MOV.
     506
         002266
002272
                   016701
032701
                                                  1$:
                                                           MOV.
                             000100
                                                           віт
                                                                     #Q$ATTN,R1
                                                                                                   ATTH CLEAR : : NO. READ AGAIN
     588
         002276
                                                           BNE
                                                                     1$
     509
                                                                    CDADD.QR$LBR. ;CD.MEMORY SIHKI.HD
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP.
QR$CR2.R1 ;READ CSR2
#M#CCCP.R1 ;IS-CC.TO.CP.CLEAR.
     510
         002300
                   016767
                             175534
                                       176424
                                                           MOV
                                                                                                   :CD-MEMORY START-ADDRESS
     511 002306
                   012767
                             120040
                                       176422
                                                           MOV-
     512
         002314
                   016701
                             176422
                                                 25:
                                                           MOV:
     513 002320
                   032701
                             000040
                                                           BIT
     514
         002324
                   001373
                                                           BNE
                                                                                                   :NO, READ AGAIN.
     515
     516
         002326
                   012767
                             000001
                                                                     #1,QR$LBR: ;TRANSFER:COUNT = 1 WORD
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
                                       176424
                                                           MOV
     517
         002334
                   012767
                              120040
                                       176422
                                                           MOV.
    518 002342
                   016701
                              176422
                                                 3$:
                                                                                                   READ CSR2
                                                           MOV
                                                                     QR$CR2.R1
    519
         002346
                   032701
                             000040
                                                           BIT
                                                                     #Q$CCCP,R1
     520 002352
                                                                                                   ;NO, READ AGAIN
                   001373
                                                           BHE
                                                                     3$
    521
    522
523
         002354
                   012767
                             000044* 176424
                                                                                                   CC MEMORY DATA BUFFÉR
                                                           MOV
                                                                     #CDDAT, QR$LBR
         002362 012767
                             120040 176422
                                                           MOV.
                                                                     #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP
    524
525
526
527
                                                           WAIT-FOR-INTERRUPT-FROM-CP.
         002370
                                                           WTSE$S - #EFN.3
    528
529
530
         002402
                                                           CLEF$S #EFN.3
    531
                                                           RE-ARM-INTERRUPTS
    532
    533 002414
                   995267
                             175420
                                                           INC
                                                                                                   :BUMP · CP · DATA · MEMORY ADDRESS
    534 002420
                   012767
                             100400
                                       176422
                                                                                                   CLEAR INTERRUPT (USE HIT BUFFER INT)
                                                           MOV
                                                                     #<Q$SM+Q$CHB>,QR$CR2
    535 002426
536 002434
                   012767
                              101000
                                       176422
                                                           MOV.
                                                                     #<Q$SM+Q$REBK>,QR$CR2
                                                                                                   :RE-ARM
                   012767
                             160000
                                       176422
                                                                     #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2:;ENABCE
    537
538
         002442
                                                           RETURN
    539
                   000001
                                                           .END
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PPLD ... M R0 M1110 27-MAR-80 15:23 PAGE 7-1
SYMBOL TA

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ALUCKE = · 040000
                                                              BYTE91=-000133
                               BYTE4 = 000004
                                                                                             LD402
                                                                                                       001464RG
                                                                                                                      002-Q$CPCC=-000010
ALUOE.=.004000
                               BYTE40= 000050
                                                              BYTE92= 000134
                                                                                                                      002 · Q$CP2 · = · 000260
002 · Q$CSC · = · 010000
                                                                                             LD4TBL 000000RG
BYTE41= 000051
BYTE42= 000052
                                                              BYTE93=-000135
                                                                                             LD4X-
                                                                                                      001760R
                                                                                             LHHIGH= · *****
                                                              BYTE94= 000136
                                                                                                                           Ø$CSEL = : 000360
BINUD:=:******** CK:
                               BYTE43= 0000053
                                                              BYTE95= 000137
                                                                                             LHLOW- = · ****** GX
                                                                                                                           Q$CSET= 000002
BITVAL = 000000
BIT0 = 000001
BIT1 = 000002
                               BYTE44= 000054
BYTE45= 000055
                                                              BYTE96= 000140
                                                                                             LOADOD: 002252R
                                                                                                                      002 Q$CSP = 020000
002 Q$DMA = 000001
                                                              BYTE97 = . 000141
                                                                                             LOADQX 002006R
                               BYTE46= 000056
                                                              BYTE98=-000142
                                                                                             LOC:EN= 000100
                                                                                                                           Q$ENBK = 040000
                                                                                                                           Q$ENBK = 040000
Q$ENOP = 020000
Q$FAL = 004000
Q$FC = 000045
Q$FO = 000044
Q$FP = 000046
Q$HBF = 000002
BIT10 = 002000
                               BYTE47=-000057
                                                              BYTE99= 000143
                                                                                             LOC.WA- 040000
BIT11 = 004000
BIT12 = 010000
                               BYTE48 = . 000060
                                                              BYTVAL=-000144
                                                                                            LOC:WB=:100000
LOOP: = ******** GX:
MARENI=:000001
                               BYTE49= 000061
                                                              CBKALL = 001000
BIT13 = 020000
                               BYTE5 = 000005
                                                              CBKCLK = . 000400
BIT14 = 040000
                               BYTE50= 0000062
                                                              CDADD:
                                                                        000040R
                                                                                        002 · MAREN2 = · 004000
BIT15 = 100000
BIT2 = 000004
                               BYTE51= 000063
                                                              CDDAT:
                                                                        000044R
                                                                                        002 · MARLOD = · 010000
                               BYTE52= 000064
                                                              CHOBRE = 100000
                                                                                        MAROUT - 000002
002 MAR.LO - 002000
                                                                                                                            Q$ICP -- 000006
        = 000010
BIT3
                               BYTE53= 000065
                                                              CODE
                                                                        000046R
                                                                                                                           Q$IHB = 000003
Q$IHRL= 000002
                                                              CPCCEN=-010000
CPCR- =-******* GX-
        = 0000020
                               BYTE54= 000066
                                                                                            MAR.OU= 002000
MAR.OU= 000040
MBKCLK= 000400
MBKCLK= 000400
MEND = ******* GX
        = 000040
BIT5
                               BYTE55= 000067
                                                                                                                           Q$IMRP= 000007
        = 000100
                               BYTE56= 000070
BYTE57= 000071
BITE
                                                              CPREAD = : 040000
                                                                                                                           Q$LBD = 001000
Q$LBDP= 001001
Q$LBP = 000001
        = 000200
                                                              CPWRTE = . 020000
        = 000400
                               BYTE58 = . 000072
                                                              CSADRD = . 000004
                                                                                             MMADRD= 000100
BIT9
      = 001000
                               BYTE59= 000073
                                                                                            MMLEFT= 000002
MMOE = 000004
                                                              CSEQCI= 100000
                                                                                                                            Q$LDCD= . 000003
                                                              CSOE - 000040
CSR1 - ********* GX
BUFSET= ****** GX
                               BYTE6 = 000006
                                                                                                                            Q$LDMD= 000004
BYTE0 = 000000
BYTE1 = 000001
                               BYTE60 = 000074
BYTE61 = 000075
                                                                                             MMWRTE = . 0000010
                                                                                                                           Q$LDPP= 002000
                                                              CSWRTE = 000100
DATA1 = *********** GX
                                                                                                                           Q$LHP = 010000
Q$MNC = 140000
                                                                                             MNOBRE = 100000
BYTE10= 000012
                               BYTE62= 000076
                                                                                             MREN1 = 000001
BYTE11=:000013
                               BYTE63=.000077
                                                              DBR.RD= 000001
                                                                                             MREN2 - - 020000
                                                                                                                           Q$MR = 000052
Q$MRP = 000040
BYTE12= 000014
                               BYTE64= 000100
                                                              DB$CPP=-001457
                                                                                             MRPCR - - ********* .GX - -
BYTE13= 0000015
                               BYTE65= 000101
                                                              DB$SPT= 000026
                                                                                             MSTRT = ****** GX
                                                                                                                            Q$MRP2= 000240
BYTE14= 0000016
                               BYTE66=-000102
BYTE67=-000103
BYTE68=-000104
                                                              DB$TPC= 000023
                                                                                             Q$MSC = 040000
Q$MSET= 000004
BYTE15= 000017
                                                              DISPGS = 100000
BYTE16=-000020
                                                              DMAAWR= 000005
                                                                                                    = 000144
                                                                                                                           Q$MSP - 100000
BYTE17= 000021
                               BYTE69= 000105
                                                              DMARRD = - 000003
                                                                                             PACK -
                                                                                                    = · ****** GX
                                                                                                                            Q$NCLK≕ 176000
BYTE18 - 000022
                               BYTE7 = 000007
BYTE70= 000106
                                                              DMARWR= 000004
                                                                                             OSPP
                                                                                                                                  = 000100
BYTE19= · 000023
                                                              002 · Q$PPSW= · 000320
BYTE2 - - 000002
                               BYTE71= 000107
                                                                                                  = 000010
                                                                                                                            Q$PP2 = 000300
                                                                                             PLB.
BYTE20= 000024
                               BYTE7.2= 000110
                                                              ERR11 = · ****** GX
                                                                                                    = .000020
                                                                                             PLC:
                                                                                                                            Q$QHLT= 000013
BYTE21 = 0000025
                               BYTE73=-000111
                                                              ERR4
                                                                     =·***** GX
                                                                                                    = . 000030
                                                                                             PLD.
                                                                                                                           0$QL = 0000043
0$QLA = 000053
BYTE22= 000026
                               BYTE74= 000112
                                                                     = · ****** GX
                                                              ERR5
                                                                                             PLRWR - - 000200
                                                                                            BYTE23=:000027
                               BYTE75= 000113
                                                              FRR7
                                                                     = · ****** GX
                                                                                                                            Q$QLB**= 000054
BYTE24= 0000030
                               BYTE76= 000114
                                                              FAHIGH= ****** GX
                                                                                                                            Q$QLR = 000001
Q$QW = 000042
BYTE25= 000031
                               BYTE77= 000115
                                                              FAL.
                                                                      000700R
BYTE26= 000032
                               BYTE78= 000116
                                                              FALOW: = ********** GX
                                                                                                                      002 · Q$RDCD= · 000005
BYTE27=-000033
                               BYTE79= 000117
                                                              FIND: = ********* GX-
HANG: = ******** GX-
                                                                                             QR$CR1= 176420
                                                                                                                            Q$RDMD= : 000006
BYTE28= 0000034
                               BYTE8 = 000010
                                                                                             QR$CR2= 176422
                                                                                                                            Q$REBK=-001000
BYTE29= 0000035
                               BYTE80= 000120
                                                                                                                      Q$RNC = 006000
002 · Q$RSC = 004000
                                                              INCVAL = · ***** GX ·
                                                                                             QR$LBR= 176424
QXCNT 000042R
BYTE3 = 000003
                                                              KILL: = : жжжжжж GX:
                               BYTE81=-000121
BYTE30= 0000036
                               BYTE82= . 000122
                                                              LBPP = - ********* GX
                                                                                             QXHIGH= ******* GX
                                                                                                                            Q$RSET=/000010
BYTE31= 000037
                               BYTE83= 000123
                                                                        000050RG
                                                              1 D4
                                                                                        002 0XL0W = жжжжжж GX
                                                                                                                            Q$SM = 100000
Q$SP = 000120
                               BYTE84= 000124
BYTE32= 0000040
                                                              LD4FC
                                                                        000672RG
                                                                                        002.0$ATTN= 000100
002.0$000
0$CCCP= 000040
BYTE33= nnnn41
                               BYTE85= 000125
                                                                                                                           ,Q$SP2·=·000340
                                                              LD4FP
                                                                        000662RG
BYTE34= 0000042 ·
                               BYTE86= . 000126
                                                              LD4LN = . 000010 G
                                                                                                                            RGQ.EN= 000200
BYTE35= 000043
                               BYTE87= 000127
                                                              1 D40L -
                                                                        000332RG
                                                                                        002 · Q$CHB · = · 000400
                                                                                                                            RGQ:VA= 020000
BYTE36 = 000044
BYTE37 = 000045
                               BYTE88 = . 000130
                                                              LD40R
                                                                        001164RG
                                                                                        002.05CHRL=.000200
                               BYTE89= 000131
                                                                                        002 · Q$CLR · = · 000040
                                                              LD40W
                                                                        000322RG
                                          300131 LD400 001450RG 002 0±CNC = 030000 SCAN = жжжжж
300011 LD401 001456RG 002 0±CNC = 030000 SCAN = жжжжж
300132 LD401 001456RG 002 0±CP = 000060
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                                                                                                                            RTNPT - = · ******
BYTE38= 000046
                               BYTE9 = 000011
                                                                                                                                  = · ****** 6X
BYTE39= 000047
                               BYTE90= 000132
```

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PPLD----MACRO-M1110 27-MAR-80 15:23 PAGE-7-2.
SYMBOL-TABLE- Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
SEQCS- = · ***** GX-
                                    T$DRD - = - 000004
                                                                        WORD11= 000026
WORD12= 000030
                                                                                                            WORD42= 000124
                                                                                                                                                WORD72=-000220
WORD73=-000222
SEQMM = · ***** GX
                                    T$EMEM= 010000
                                                                                                           WORD43= 000126
JEQ.CI= 000010
                                    T$FSAA=-000000
                                                                        WORD13=-000032
                                                                                                           WORD44=-000130
                                                                                                                                                WORD74= -000224
STOP.
        = - жикиники GX-
                                    T$FSAB=-000004
                                                                        WORD14= 000034
                                                                                                           WORD45=-000132
                                                                                                                                                WORD75= 000226
S$CLR - = - 000000
                                    T$FSAC = . 000014
                                                                        WORD15=-000036
WORD16=-000040
WORD17=-000042
                                                                                                           WORD46= 000134
                                                                                                                                                WORD76= 000230
WORD77= 000232
S$LA · = · 000001
                                    T$FSB2= 000010
                                                                                                            WORD47= 000136
S$QB· = 000005
                                    T$IB: =:000026
                                                                                                           WORD48= 000140
                                                                                                                                                WORD78= 000234
                                                                                                                                                                        # Day & Bryen
S$QR -
         = 000006
                                    T$IBAR = 000024
                                                                        WORD18= 000044
                                                                                                           WORD49= 000142
WORD5 = 000012
                                                                                                                                                WORD79= 000236
S$QX- = 000004
                                    T$IBE - = - 020000
                                                                        WORD19=-000046
WORD2-=-000004
WORD20=-000050
                                                                                                                                               WORDS = 000020°
WORDS0 = 000240
WORDS1 = 000242
S$SR - = 000007
                                    T$IBF - = - 040000
                                                                                                           WORD50= 000144
3$S1
         = 0000010
                                    T$ICD - = - 000040
                                                                                                           WORD51= 000146
WORD52= 000150
WORD53= 000152
         = 000014
5$92
                                    T$MODE = 004000
                                                                        WORD21 = 000052
                                                                                                                                                WORD82= 000244
 TD$CTR=-176370
                                    T$0B · = · 000036
                                                                        WORD22= 000054
                                                                                                                                               WORD83= 000246
WORD84≅ 000250
WORD85= 000252
TD$CTW= 176360
                                    T$0BE - = - 004000
                                                                        WORD23=-000056
WORD24=-000060
                                                                                                           WORD54= 000154
TD$IHL= 004000
TD$MEM= 000270
                                    T$0BF·=·010000
                                                                                                            WORD55= 000156
                                    T$0BRA= · 000034
T$0BWA= · 000032
                                                                        WORD25=-000062
                                                                                                           WORD56=-000160
WORD57=-000162
                                                                                                                                                WORD86=-000254
 TD$OAR= 176344
                                                                                                                                               WURD86= 000256
WURD87= 000256
WURD88= 000260
WURD89= 000262
WURD9 = 0000262
WURD90= 000264
WURD91= 000266
WURD92= 000270
                                                                        WORD26= 000064
TD$OTR= 176346
TD$QRD= 000274
                                    T$0UTA=-100000
                                                                        WORD27=-000005
WORD28=-000070
                                                                                                            WORD58= 000164
                                    T$RBDO= 000200
T$RNB = 000040
T$RSET= 040000
                                                                                                           WORD59= 000166
WORD6 = 000014
TD$SW-=-176376
TD$TAR=-176372
                                                                        WORD29= 000072
                                                                        WORD3 = 000006
                                                                                                            WORD60= 000170
 TD$TAW=-176362
                                    T$SC+
                                            = 0000022
                                                                        WORD30=-000074
WORD31=-000076
WORD32=-000100
                                                                                                            WORD61= 000172
TD$TDR= 176374
                                    T$SCLK=-020000
                                                                                                           WORD62=-000174
WORD63=-000176
WORD64=-000200
 TD$TDW≕ 176364
                                    T$SEG1=-000000
T$SEG2=-000001
T$AD -- 000020
T$BA -- 000002
                                                                                                                                                WORD93 = . 000272
                                                                        WORD33--000102
                                                                                                                                               WORD94= 000274
WORD95= 000276
                                    T$SEG3= 000002
                                                                        WORD34= 000104
WORD35= 000106
                                                                                                            WORD65= 000202
T$BD = 000010
                                    T$50· = 000001
T$UBUS= 100000
T$1CLK= 000400
                                                                                                           WORD66 = 000204
WORD67 = 000206
                                                                                                                                                WORD96= 000300
T$BSO·=·100000
T$BT·=·000020
T$BTAR=·000030
                                                                        WORD36= 000110
                                                                                                                                                WORD97= 000302
                                                                        WORD37= 000112
                                                                                                            WORD68= 000210
                                                                                                                                               WORD98= 000304
WORD99= 000306
                                                                        WORD38= 000114
                                    T$8BEN= : 000020
                                                                                                            WORD69=-000212
T$BTD - = - 002000
                                    UBD: IN=-000020
                                                                        WORD39= 000116
                                                                                                           WORD7 = 000016
WORD70= 000214
                                                                                                                                               WRDVAL = . 000310
T$CD - - 000100
                                    WORD0 = 000000
WORD1 = 000002
                                                                        WORD4 = 000010
                                                                                                                                               XTREAD= 001000
T$CLK - - 002000
                                                                        WORD40 = . 000120
                                                                                                           WORD71= 000216
                                                                                                                                               XTWRTE = . 000400
T$DISK=-000200
                                    WORD10= 000024
                                                                        WORD41= 000122
            000000
. ABS.
                            aaa
            000000
                            001
PPLD
            002444
                            002
ERRORS DETECTED:
                          Я
VINTURL MEMORY USED: 3729 WORDS (+15 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
ELAPSED TIME: 00:00:56
PPLD/PPLD/-SP=720 1377
```

""。它就是"

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MACRO: M4110 27-MAR-80 15:24 PAGE 5
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
PPPR-
                                                                                                                                             .#ITLE- RPPR
.PSECT PPPR
                      000000
                                                                                                                                            HARDWARE QUERY RESOLVER "MANUAL" DEBUGGING AIDS PIPELINED PROCESSORS: TEST-ROUTINES.
                                                                                                                                            COMMANDS:
                                                                                                                                                                   PRINT PPS - MEMORY - CONTENTS -
              10
              11
                                                                                                                                            ONCE A COMMAND HAS BEEN EXECUTED (OR AN ERROR ENCOUNTERED)
                                                                                                                                             THIS MODULE RETURNS CONTROL TO THE MODULE PPS AT LOCATION
                                                                                                                                             'PPSXX'.
              14
15
                                                                                                                           ************
              17
18
              19
                                                                                                                                           THE COMMANDS TO PRINT QEX MEMORIES CANNOT BE USED UNLESS MRP MICROPROGRAM MEMORY AND CP CONTROL STORE HAVE BEEN LOADED VIA THE 'LOADER' PROGRAM GEX PRINTING MAKES USE OF CP DATA MEMORY - THE PREVIOUS CONTENTS OF THAT MEMORY ARE DESTROYED.
              20
21
22
23
24
25
26
27
                                                                                                                                                                                                                                                             m m
                                                                                                                          *************
                                                                                                                                                                                                                                                    28
29
30
                                                                                                                                            .MCALL WTSE$S.CLEF$S
              31
                                                                                                                                           TABLE OF VALID PPS MEMORY MNEMONICS AND ADDRESSES OF
              32
33
                                                                                                                                           ASSOCIATED ROUTINES.
              34
                      000000
                                                                                                                    PR4TBL::
              35
                       000000
                                                       121
                                                                               127
                                                                                                                                            .ASCII-
                                                                                                                                                                    /QW/
                                                                                                                                                                                                                                          : ОЕЎ<sup>®</sup>МІ́ЙОЎОМ МЕ́МОКА
                       000002
                                              0003424
                                                                                                                                             .WORD
                                                                                                                                                                   PR4QW
              37
                       000004
                                                                               114
                                                                                                                                            .ASCII
                                                                                                                                                                    201.2
                                                                                                                                                                                                                                         ; QEX LOCATION MEMORY
              38
                                              0003524
                       000006
                                                                                                                                            .WORD
                                                                                                                                                                   PR40L
                       000010
                                                                               120
                                                       106
                                                                                                                                             .ASCII
                                                                                                                                                                    /FP/
                                                                                                                                                                                                                                         :FAL · POINTER · MEMORY
              40
                      000012
                                              301356
                                                                                                                                            .WORD
                                                                                                                                                                   PR4FP
              41
                      000014
                                                       106
                                                                               103
                                                                                                                                                                    ZECZ
                                                                                                                                                                                                                                         ;FAL · COUNTER · MEMORY
              42
                      000016
                                              001366
                                                                                                                                             .WORD
                                                                                                                                                                   PR4FC
              43
                       000020
                                                       186
                                                                               117
                                                                                                                                                                                                                                         :FAL · OVERFLOW · BITS.
              44
                       000022
                                              001376
                                                                                                                                             .WORD
                                                                                                                                                                   PR4FO
              45
                      000024
                                                       121
                                                                                                                                            .ASCII
                                                                                                                                                                   /QR/
                                                                                                                                                                                                                                         :QLB-REFERENCE-PAGE
                      000026
              46
                                              001554
                                                                                                                                                                   PR40R
                                                                                                                                            .WORD
                       000030
                                                       121
                                                                              060
                                                                                                                                                                  /00/
PR400
                                                                                                                                             .ASCII
                                                                                                                                                                                                                                         ;QLB.PAGE.0
             48
49
                      000032
                                              001744
                                                                                                                                            .WORD
                      000034
                                                      121
                                                                              061
                                                                                                                                            .ASCII.
                                                                                                                                                                    /01/
                                                                                                                                                                                                                                         ;QLB · PAGE · 1
                       000036
                                              001752
                                                                                                                                             .WORD
                                                                                                                                                                   PR401
             51
52
                      000040
                                                                              062
                                                                                                                                            .ASCII.
                                                                                                                                                                   7027
                                                                                                                                                                                                                                         :QLB-PAGE-2
                                              001760
                      000042
                                                                                                                                            .WORD
                                                                                                                                                                   PR402
            53
54
55
                                              000044
                                                                                                                   PR4LH
                                                                                                                                                                                                                                           · THE STATE OF STATE 
             56
                     000044
                                            000000
                                                                                               CDADD: WORD 0 : ADDR FOR PRINTING FROM CP DATA MEMORY DATA FOR TRANSFER TO CP DATA MEMORY Approved For Release 2005/07/12 CIA-RDP85-00514R00020002001-3
                     000046
                                            000000
```

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物研究
PPPR-
                  O M1110 27-MAR-80 15:24 PAGE 5-1
Approved For Release 2005/07/19 CIA-RDP85-00514R000200020001-3
                        000000
                                                                                                                          :NUMBER.OF QEX.ADDR/DATA.PAIRS
:CODE.FOR.MEMORY.SELECTION.
                                                             QXCNT:
                                                                          . HORD
       59
            000052
                                                             CODE:
                                                                          .WORD
                                                                                      0
       60
       61
       62
63
64
                                                                         PRINT
                                                                         PERFORM THIRD LEVEL PARSING
                                                                         EG. IN THE COMMAND:
PP>PR OW 0
       65
       66
67
                                                                         PARSE THE TOW!
       68
            000054
                                                             PPPR4∷
        70
71
            000054
000060
                                                                         CALL
                                                                                     FIND
                                                                                                                          :LOCATE · MEMORY · MNEMONIC · IN · COMMAND · LINE
                        103004
                                                                         BCC -
                                                                                      1$
                                                                                                                          OK, CONTINUE
MISSING OPERAND:
            000062
                                                                                      ERR4
                                                                         CALL
        73
74
            000066
                        000167
                                                                          JMP .
                                                                                      PR4X
            000072
                                                                                                                          :NUMBER OF TABLE ENTRIES
:POINT TO TABLE
:MATCH AGAINST COMMAND LINE
                        012700
                                     000044
                                                              1$:
                                                                         MOV.
                                                                                      #PR4LN,R0
            000076
                        012702
                                    000000
                                                                                      #PR4TBL,R2
                                                                         MOV:
            000102
                                                                         CALL
BCC+
                                                                                      SCAN
        78
                        103004
            000106
                                                                                      2$
                                                                                                                          :MATCH WAS MADE
        79
            000110
                                                                         CALL
                                                                                      ERR7
                                                                                                                          ; "INVALID MEMORY MNEMONIC:
            000114
                        000167 002040
                                                                          JMP
       81
       82
                                                                         SAVE-POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC. SCAN-THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
       83
       84
                                                                             START ADDRESS ONLY. PRINT ONE MEMORY LOCATION.
PP>PR OW Ø
START ADDRESS, LOOP INDICATOR, LOOP ON THE READING OF THIS ONE MEMORY LOCATION ONLY. PRINT THE CONTENTS ONLY ONCE.
       85
       86
       87
       89
                                                                              ONCE:
       90
91
92
                                                                             ONCE:
PP>LD:QU:0 L
START ADDRESS, END:ADDRESS, NO:LOOP: PRINTETHE CONTENTS
OF MEMORY BETWEEN THE START AND END ADDRESSES.
                                                                                                                                                   THE RELIGIONS
                                                                             START ADDRESS, END ADDRESS, LOOP INDICATOR, READ THE CONTENTS OF MEMORY BETWEEN THE START AND END ADDRESSES, HOWEVER, PRINTOULLY THE CONTENTS OF MEMORY AT THE START ADDRESS.

PP>PR QW Ø 7 L
       94
95
       96
       98
       99
            000120
                        010167
                                    000000G
                                                             2$:
                                                                         MOV.
                                                                                      R1.RTMPT
                                                                                                                          :SAVE POINTER:
:LOCATE NON-BLANK IN COMMAND LINE:
:OK, CONTINUE
      100
            000124
                                                                         CALL
BCC
                                                                                      FIND
      ini
            000130
                        103004
                                                                                      3$
      102
            000132
                                                                         CALL
                                                                                      ERR4
                                                                                                                          : 'MISSING OPERAND:
      103
            000136
                        000167 002016
                                                                         JMP.
                                                                                      PR4X
      194
           000142
                                                             3$:
                                                                                     PACK
                                                                         CALL
                                                                                                                           CONVERT COMMAND LINE VALUE TO BINARY
      105 000146
                        103004
                                                                         BCC.
                                                                                      4$
                                                                                                                           CONVERSION SUCCESSFUL
                                                                                                                          : INVALID NUMERIC VALUE
      106
           000150
                                                                         CALL
                                                                                      ERR5
      107
            000154
                        000167
                                    002000
      108
                                                                                                                        SAVE PRINT START ADDRESS
MANYE IT TWICE
INIT END ADDRESS
      109 000160
                        016767
                                    000000G 000000G 4$:
                                                                                  . BIHWD.MSTRT
BIHWD.MSTR2
                                                                         MOV.
           000166
      110
                        016767
                                    000000G 000000G
177777 000000G
      111
           000174
                        012767
                                                                         MOV.
      112
                                                  START ADDRESS HAS BEEN FOUND. SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2.3 ABOVE). IF THERE IS NOTHING.

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     113
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MACRO-M1110 27-MAR-80 15:24 PAGE-5-2
                                     Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
115
                                                        FURTHER-IN-THE-COMMAND LINE, CONDITION-1 IS-IN-EFFECT.
116
    000202
                                                        CALL
                                                                  FIND
                                                                                                 ;SCAN · COMMAND · LINE ·
    000206
000210
118
               193994
                                                        BCC:
                                                                  5$
                                                                                                 SOMETHING THERE
119
                                                        MOV
                                                                  MSTRT, MEND
               016767
                         000000G - 000000G
                                                                                                 ;SET-END-ADDR-=-START-ADDR
;JUMP-TO-RTN-
120
    000216
               000445
                                                                   9$
121
122
    000220
               122711
                                                        CMPB
                                                                  #1L,(R1)
                                                                                                 :LOOP INDICATOR:
:NO. MUST BE UPPER ADDRESS:
:SET FLAG FOR OUTPUT CONTROL
                         000114
                                              5$:
123
     000224
               001011
                                                        BHE
                                                                  6$
                                                                  #OUT.BASE
124
125
    000226
               052767
                         000000G · 000000G
                                                        BIS
    000234
               016767
                         000000G · 000000G
                                                        MOV
                                                                  MSTRT, MEND
                                                                                                 SET-END-ADDR = START ADDR:
HOW-TO-STOP-LOOP:
JUMP-TO-RTN
126
     000242
                                                        CALL
                                                                  HANG
                                                                                                                              == ₹$K; ;
127
     000246
               000431
128
     000250
                                                        GALL
BCC+
129
                                                                  PACK
                                                                                                 CONVERT-UPPER-ADDRESS
                                              6$:
     000254
130
               103004
                                                                                                 OK, CONTINUE:
INVALID: NUMERIC
                                                                  7$
     000256
                                                        CALL
                                                                  ERR5
132
    000262
               000167
                         001672
                                                                                                 :EXIT
133
                                                        SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION 4)
134
135
136
     000266
                                                                  BINWD, MEND
137
               016767
                         000000G 000000G 7$:
                                                        MOV:
                                                                                                 :SET UP END ADDRESS
     000274
                                                                                                 CHECK FOR LOOP INDICATOR
NO LOOP TO
CORRECT LOOP, INDICATOR
138
                                                        CALL
                                                                  FIND
     000300
               103414
                                                        BCS
                                                                  9$
140
     000302
               122711
                         000114
                                                        CMPB
                                                                  #*L,(R1)
141
     000306
               001404
                                                        BEQ
                                                                  8$
                                                                                                 ;YES
     000310
142
                                                                  ERR11
                                                        CALL
143
     000314
               000167
                                                        JMP
                         001640
                                                                  PR4X
                                                                                                 : NO
144
     000320
               052767
                         000000G.000000G.8$:
                                                        BIS.
                                                                   #OUT,BASE
                                                                                                 ;SET-OUTPUT-CONTROL
145
     000326
                                                        CALL
                                                                  HANG
                                                                                                 ;HOW-TO-STOP-LOOP
                                                                                                 :POINT.TO.ROUTINE
:JUMP.TO.ROUTINE.
147
     000332
               016701
                         000000G
                                                        MOV.
                                                                  RTNPT,R1
                                              9$:
148
     000336
               000171
                         000000
149
150
i5 i
                                                        PRINT-FROM-QEX-WINDOW-MEMORY-
PRINT-FROM-QEX-LOCATION-MEMORY
152
153
154
 i55
     000342
               012767
                          000042
                                    177502 PR40W::
                                                        MOV
                                                                   #Q$QW,CODE.
                                                                                                 :SET-MEMORY-CODE - = - WINDOW
     999359
156
               000403
                                                                  PQEX
157
                                              PR4QL::
     000352
               012767
                          000043
                                    177472
                                                        MOM
                                                                  #Q$QL,CODE
                                                                                                 :SET-CODE-=-LOCATION
159
     000360
               316746
                          000000G
                                              POEX:
                                                        MOM
                                                                  QXHIGH,-(SP)
                                                                                                 ;SUPPLY-UPPER-MEMORY LIMIT
160
     000364
               016746
                         000000G
                                                        MOV
                                                                  QXLOW,-(SP)
BUFSET:
                                                                                                 ;LOWER·LIMIT
161
     000370
                                                                                                 ;PREPARE FOR LOAD
;NO ERROR
                                                        CALL
               103002
162
     000374
                                                        BCC
                                                                   1$
163
     000376
               000167
                         001556
                                                         JMP
                                                                  PR4X
                                                                                                 :ERROR
164
                                                        CALCULATE: THE: NUMBER: OF: WORDS: TO TRANSFER MSTR2: =: START: ADDRESS:
165
166
167
                                                                = · END · ADDRESS
168
                                                                                                         START ADDRESS
169
     000402
               016700
                         000000G
                                                        MOV
                                                                  MSTR2, RO
                                              1$:
                                                                              : LOAD : END : ADDRESS :

: LOAD : END : ADDRESS :

: GET : NUMBER : OF : WOR

$\forall A-RDP85-00514R000200020001-3
     000406
               016701
                                                                  MEND.R1
170
                         000000G
                                                        MOV
     000412
               160001
                                                                                                                 OF WORDS TO PRINT
                                     Approved For Release 2005/07/12
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PPPR-

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W. T. W. T. W. W.
PPPR-
               0.M1110 27-MAR-80 15:24 PAGE 5-3
                                          Approved For Release 2005/07/12—CIA-RDP85-00514R000200020001-3
     172 000414
                    005201
                                                             TNC:
                                                                                                     :+1 (BEACUSE OF ZERO-REL ADDRESS)
     173
         000416
                   010167
                              177426
                                                                       R1.QXCNT
                                                             MOV
                                                                                                     :SAVE COUNT.
                                                                                                                          5. 1
                                                             WRITE-THE-FLAG-(10" = READ) AND THE TRANSFER-COUNT INTO
     175
                                                             WRITE-THE-FLAG-COM = KEHDZ HOD-THE-TRANS-THE-THE-FIRST-TWO-LOCATIONS-OF-CP-DATA-MEMORY
     176
177
     178
         000422 005046
                                                                                                     ;START-MICROCODE-AT-0
     179
         ййй424
                                                             CALL
                                                                       SECCS
     180
          000430
                    885846
                                                             CLR:
                                                                       -(SP)
                                                                                                     : RESET - BR - INHIBIT -
     181
          000432
                                                                       CPCR +377,-(SP)
                                                             CALL
     182
         000436
                    012746
                              000377
                                                             MOV
                                                                                                     ;SET-MRP-MICRO-ADDRESS-=-X1FF1 (JUMP-SELF)
     183
         000442
                                                             CALL
                                                                       SEQMM-
          000446
                    005046
                                                             CLR.
                                                                       -(SP)
                                                                                                     :RESET BR INHIBIT
     185
          000450
                                                                       MRRCR
                                                             CALL
     186
          000454
                    012767
                              001000
                                        176422
                                                             MOV
                                                                       #Q$REBK.QR$CR2
                                                                                                     #RE-ARM-INTERRUPTS-
#SET-SEARCH-MODE-+ ENABLE-INTERRUPTS-
#CLEAR-ALL_SELECTIONS-
     187
          000462
                    012767
                              120000
                                        176422
                                                             MOV-
                                                                       #<Q$SM+Q$ENOP>,QR$CR2.
                    012746
          000470
                              000360
                                                             MOV.
BIS.
                                                                       #Q$CSEL,-(SP)
     189
          000474
                    052716
                              001001
                                                                       #<Q$LBD+Q$LBP>,(SP)
                                                                                                     :CLEAR DRIVE AND PULSE
     190 000500
191 000504
                              030000
                    052716
                                                                       #Q$CNC,(SP)
                                                             BIS
                                                                                                     :CLEAR · CP · NO-CLOCK · :SET · NOTHING ·
                    005046
                                                             CLR
                                                                       -(SP)
     192
          000506
                                                             CALL
                                                                       CSR1
     193
                                                                                                     :WRITE-FLAG-TO-CD-ADDR-0
     194 000512
                    005067
                              177326
                                                             CLR.
                                                                       CDADD.
     195 000516
                    005067
                              177324
                                                             CLR
      i96
          000522
                                                             CALL
                                                                       LOADCD.
     197
          000526
                              177316 177312
                                                                       QXCNT, CDDAT
                                                             MOV.
                                                                                                     ;WRITE-QEX ADDR/DATA PAIRS-COUNT-TO-CD-LOC-1
     198 000534
                                                                       LOADCD.
                                                             CALL
     199
                                                             NOW-FILL-EVERY-OTHER-LOCATION-IN CP-DATA-MEMORY-WITH-A-QEX-ADDRESS-(UP TO-THE-UPPER-LIMIT-OF-QEX-MEMORY-AS-ENTERED-IN-THE-COMMAND-LINE).
     200
     201
     202
     203
          000540
     204
                    016767
                              000000G · 177300
                                                             MOV.
                                                                       MSTR2,CDDAT
LOADCD
                                                                                                      :PUT GEX.ADDRESS.IN CP.DATA.MEMORY
     205
          000546
                                                             CALL
                                                                                                     :LOADCD INCREMENTS CDADD : T
:INCREMENT AGAIN - PASS 1 ADDRESS
     286
          000552
                    005267
                               177266
                                                             INC
                                                                       CDADD -
          000556
                                                                                                     ADVANCE DEX ADDRESS
HAS UPPER MEM LIMIT BEEN REACHED
     207
                    066767
                              000000G · 000000G
                                                             ADD:
                                                                       INCVAL, MSTR2
     208 000564
                    026767
                              000000G · 000000G
                                                             CMP
                                                                       MSTR2,MEND
                                                                                                     :CLEAR NOTHING IN CSRI SET NO-CLOCKS
     209 000572-
                    101762
                                                             BLOS
     210
     211 000574
212 000576
213 000602
                    005046
                                                             CLR.
                                                                       -(SP)
                    012746
                              176000
                                                             MOV.
                                                                       #Q$HCLK,-(SP)
                                                             CALL
                                                                       CSR4
     214 000606
215
                    005067
                              176422
                                                             CLR:
                                                                       QR$CR2
     216
                                                             RUN-THE-GEX-MICROCODE: MICOCODE-READS-GEX-CONTENTS-INTO-CP DATA-MEMORY-SLOTS-SKIPPED-ABOVE: IE: THE DATA-IS READ IN FOLLOWING EACH-ADDRESS: THE-FIRST-DATA-WORD-IS-IN CP-
     217
     218
     219
                                                             DATA MEMORY LOCATION 3.
     220
     221 000612
     222 000612
                    016746
                                                             MOV
                                                                       CODE,-(SP)
                                                                                                      SELECT WINDOW OR TOCATION MEMORY.
          000616
                                                                                                      START CP MEROCODE AT X:3F0
                                                             CALL
                                                                       PPCR
     224 000622
                                                             MOV.
                                                                       #1760,-(SP)
     225 000626
226 000632
                                                             CALL
                                                                       SECCS
         000632 005046
                                                             CLR -
                                                                       -(SP)
                                                                                                      :RESET-BR-INHIBIT-
                                                                       CPCR
     227 000634
                                                             CALL
                                          MOV #377.-(SP) SET.MRP.MICRO.ADDRESS = X*FF*. (JUMP.SELF)
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     228 000640
                    012746
                              000377
```

```
PPPR-
          MACRO M1110 27-MAR-80 15:24 PAGE 5-4
                                          Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     229 000644
                                                             CALL
                                                                       SEQMM.
                    995946
                                                             CLR:
     230 000650
                                                                        -(SP)
                                                                                                      :RESET-BR-INHIBIT-
                                                                        MRPCR
#Q$REBK.QR$CR2 ;RE-ARM.INTERRUPTS
#<Q$LDPP+Q$ENOP>,QR$CR2.;SET.LOAD.PPS.MODE.+ ENABLE.INTERRUPT$
     23 i
          000652
                                                             CALL -
                                                                       MRPCR
     232 - 000656
                    012767
                              001000
                                         176422 -
                                                             MOV.
     233 000664
                    012767
                              022000
                                         176422
                                                             MOV.
                    012746
                                                                                                      CLEAR ALL SELECTIONS CLEAR DRIVE AND PULSE CLEAR ALL NO-CLOCKS
     234 000672
                              000360
                                                             MOV
                                                                        #Q$CSEL,-(SP)
                    052716
     235 000676
                              001001
                                                             813
                                                                        #<Q$LBD+Q$LBP>,(SP)
          000702
                    052716
     236
                                                                        #Q$NCLK,(SP)
                                                                        -(SP)
          000706
     237
                    005046
                                                             CLR.
                                                                                                      :SET NOTHING
          000710
     238
                                                                       CSR1
                                                             CALL
     240
241
                                                             WAIT-FOR-INTERRUPT-FROM-CP-
     242.000714
                                                             WT3E$S - #EFN.3
     243
     244 000726
                                                             CLEF$S: #EFN.3
     245
          000740
                                                             CLR
                                                                        -(SP)
                                                                                                      ;CLEAR · NOTHING · IN · CSR1
;SET · NO-CLOCKS ·
          000742
000746
     247
                     012746
                               176000
                                                                        #Q$NCLK,-(SP)
     248
                                                                        CSR1
                                                             CALL
     249
          000752
                    005067
                               176422
                                                             CLR -
                                                                        QR$CR2
                                                                                                       :SET-LOAD-MODE-
     250
     251
                                                             PRINT-QEX-VALUES-FROM-CP-DATA-MEMORY-
     252
          000756
                    005046
                                                             GLR
                                                                        -(SP)
                                                                                                       :START-MICROCODE-AT-0
     254
          000760
                                                              CALL
                                                                        SEQCS
     255
          000764
                     005046
                                                              CLR.
                                                                                                       ; RESET.BR. INHIBIT.
     256
          000766
                                                                        CPCR
#377.-(SP)
                                                              CALL
          000772
                                                                                                      ;SET-MRP-MICRO-ADDRESS-#-XFFF (JUMP-SELF)
                    012746
                              000377
                                                              MOV.
     258
          000776
                                                                        SEQMM-
     259
          001002
                     005046
                                                              CLR.
                                                                         -(SP)
                                                                                                       :RESET-BR-INHIBIT-
     260
          001004
                                                              CALL
                                                                        MRPCR
          001010
                     012767
                               001000: 176422
                                                              MOV-
                                                                        #OsREBK,ORSCR2
                                                                                                       ;RE-ARM.INTERRUPTS.
     262-001016
                     012767
                               120000 176422
                                                                        #<Q$SM+Q$ENOP>.QR$CR2
                                                                                                      SET SEARCH MODE + ENABLE INTERRUPTS CLEAR ALL SELECTIONS CLEAR DRIVE AND PULSE
                                                              MOV
                    012746
052716
     263
          001024
                               000360
                                                              MOV
                                                                        #Q$CSEL,-(SP)
     264 001030
                               991991
                                                              BIS
                                                                        #<Q$LBD+Q$LBP>,(SP)
                     052716
     265
          001034
                               030000
                                                              BIS
                                                                        #Q$CNC,(SP)
                                                                                                       ;CLEAR · CP · NO-CLOCK ·
          001040
                     005046
      266
                                                              CLR
                                                                        -(SP)
                                                                                                       ;SET-NOTHING-
          001042
                                                              CALL
     268
          001046
                     016767
                               000000G · 000000G ·
     269
                                                              MOV
                                                                        MSTRT, MSTR2.
                                                                                                       :REFRESH-START-ADDRESS-
                     012767
                               000003 176762
     270
          001054
                                                                                                       :START-PRINTING FROM CP-DATA-ADDR-3
:MOVE-ATTN CODE-TO-LOD-BUS-REG
                                                              MOM
                                                                        #3,CDADD:
                                                                        #3.CDADU:
#0sRDCD.OR$LBR ;MOVE.ATTN CODE.TO.E02 E03
#<Q$ATTN+Q$$M+Q$ENOP>,QR$CR2.;SET.ATTN.CODE.READY
OP$CR2.R1 ;READ.CSR2
                     012767
                                         176424
          001062
                               000005
                                                   10$:
                                                              MOV.
     272-001070
                     012767
                               120100
                                                              MOV
                                         176422
                                                                                                       *KEAD CSR2

*ATTN CLEAR

*NO. READ COOT!
                    016701
032701
     273
          001076
                               176422
                                                   5$:
                                                              MOV
     274 001102
                               000100
                                                              BIT
     275
          001106
                     001373
                                                              BNE
                                                                                                       :NO. READ-AGAIN-
     277
          001110
                     016767
                               176730
                                         176424
                                                              MOV
                                                                        CDADD, QR$LBR
                                                                                                       ;CD · MEMORY START · ADDRESS ·
     278
          001116
                     012767
                               120040
                                                                        #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2.;SET.CC.TO.CP
QR$CR2,R! ;READ.CSR2
#Q$CCCP,R! ;IS.CC.TO.CP.CLEAR
                                         176422
                                                              MOV
          001124
                     016701
                               176422
                                                              MOV.
     288
          001130
                     032701
                               000040
                                                              BIT.
     281
          001134
                     001373
                                                              BNE
                                                                                                       ;NO, READ AGAIN-
                                          176424 MOV #1.0R$LBR TRANSFER COUNT 1 WORD.
176422 MOV #<.0$CCP+0$SM+0$ENOP>.0R$CR2.SET.CC.TO.CP.

QR$CR2.R1
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     283 001136
                    012767
012767
                               000001
                                          176424
     284 001144
                               120040
                                         176422
```

001152

016701

176422

```
التريقين
PPPR-
              0-M1110 27-MAR-80 15:24 PAGE 5-5-6
                                      Approved For Release 2005/07/12 CIA-RDP85-00514R000200020001-3
    286 001156
                  032701
                            000040
                                                        BIT
                                                                  #Q$CCCP,R1
                                                                                             : IS - CC - TO - CP - CLEAR
    287
         001162
                  001373
                                                        BNE
                                                                 7$
                                                                                             ;NO, READ AGAIN
    288
    289 001164
                  012767
                           000000G-176424
                                                        MOV
                                                                 #DATA1,QR$LBR
                                                                                             :CC MEMORY DATA BUFFER
    290 001172
                                                                  #<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP
                  012767
                            120040 176422
                                                        MOV
    291
292
                                                        WAIT-FOR-INTERRUPT-FROM-CP
    293
    294 001200
                                                        WTSE$S #EFN.3
     296
         001212
                                                        CLEF$S: #EFN.3
    297
    298
                                                        RE-ARM. INTERRUPTS
                                                                                                                        . 1%
                                                                                                                \mathbb{R}^{\mathbb{N}}
    300 001224
                  012767
                            100400
                                     176422
                                                                                             CLEAR INTERRUPT (USE HIT BUFFER INT)
                                                        MOV
                                                                 #<Q$SM+Q$CHB>,QR$CR2
    301
        001232
                  012767
                            101000
                                      176422
                                                                 #<Q$SM+Q$REBK>,QR$CR2
#<Q$SM+Q$ENBK+Q$ENDP>,QR$CR2
#ENABLE
                                                        MOV
    302-001240 - 012767
                            160000
                                     176422
     304
                                                        PRINT-ONE-QEX-WORD
    305
     306
         001246
                                                        GALL
                                                                 PRDATA
                                                                                             :PRINT-IT-
    307
    308 001252
                  062767
                            000002:
                                     176564
                                                                                             ;BUMP·CP·DATA·MEMORY ADDRESS
;ADVANCE·ADDRESS
                                                                 #2,CDADD
    309
         001260
                   866767
                            000000G-000000G
                                                        ADD
                                                                  INCVAL, MSTR2
    310
         001266
                   026767
                            000000G 000000G
                                                        CMP
                                                                 MSTR2, MEND
                                                                                             ; HAS · UPPER MEMORY · LIMIT · BEEN · REACHED !
    311
         001274
                   101672
                                                        BLOS
                                                                 103
                                                                                             :NO, CONTINUE
    312.001276
                  832767
                            000000G 000000G
                                                                 #LOOP, BASE
                                                                                             ;LOOP.ON.?
    313
         001304
                  001402
                                                        BEQ
                                                                 8$
                                                                                             :NO, EXIT
    314 001306
                  000167
                            177300
                                                        JMP
                                                                 STRIMO
                                                                                             START MICROCODE FOR DEX READ
                                                                                                      - -# <sub>74</sub>2.
    316
                                                        RE-ARM. INTERRUPTS
    317
    318
         001312 012767
                            100400
                                     176422
                                              8$:
                                                        MOV.
                                                                 #<Q$SM+Q$CHB>,QR$CR2
                                                                                             :CLEAR · INTERRUPT · (USE · HIT · BUFFER · INT)
    319 001320
                  012767
                            101000
                                     176422
                                                        MOV
                                                                 #<Q$SM+Q$REBK>,QR$CR2 ;RE-ARM
#<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2;ENABLE.
    328
         001326
                  012767
                            160000
                                     176422
    322
         001334
                   005046
                                                        CLR
                                                                  -(SP)
                                                                                             :CLEAR · NOTHING · IN · CSR 1
    323 001336
324 001342
                  012746
                            176000
                                                        MOV
                                                                  #Q$NCLK,-(SP)
                                                                                             :SET-NO-CLOCKS-
                                                        CALL
                                                                 CSR1
    325 001346
                   005067
                            176422
                                                        CLR
                                                                 QR$CR2
                                                                                             ;SET-LOAD-MODE
    326
         001352
                  000167
                            000602
                                                                 PR4X
    328
     329
                                                        PRINT-FROM-FAL-POINTER MEMORY.
    339
                                                        PRINT FROM FAL COUNTER MEMORY
    331
                                                        PRINT.FROM.FAL.OVERFLOW.MEMORY
    333
    334 001356
335 001364
                  012767
                            000046
                                     176466
                                              PR4FP::
                                                        MOV
                                                                 #Q$FP,CODE
                                                                                             ;SET-MEMORY-CODE-=-POINTER-
                  000407
                                                        BP
                                                                 PFAL
         001366
                   012767
                            000045
                                              PR4FC::
                                                        MOV
                                                                                             SET CODE → COUNTER
                                                                 #Q$FC,CODE
    337
         001374
                  000403
                                                                 PFAL
        001376
    338
                  812767
                            999944
                                     176446
                                              PR4Fn::
                                                        MOV
                                                                  #Q$FO,CODE
                                                                                             :SET.CODE. = . OVERFLOW
    340 001404
341 001410
                  016746
                            000000G
                                              PFAL:
                                                                                             :SUPPLY MEMORY UPPER LIMIT:
:LOWER LIMIT:
:PREPARE FOR LOAD:
                                                                 FAHIGH,-(SP)
                  316746
                           000000G
                                                        MOV.
                                                                 FALOW,-(SP)
BUFSET
    342 001414
                                                        CALL
                                      Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

PPPR MACRO M1110 27-MAR-80 15 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

```
:OK, CONTINUE
                                                   BCC -
                                                             1$
             103006
    001420
                                                                                         ;VALUE FOR QCL POINTER:
;LOAD QCL POINTER:
                                                   MOV.
                                                             #077777,-(SP)
                       027777
344
    001422
             012746
                                                   CALL
                                                             STOP
345
    001426
                                                   JMP .
                                                             PR4X
346
             1000167
                       000522
347
                                                                                         ;LOAD-ADDR INTO-QCL-POINTER
                                          1$:
                                                   MOV
                                                             MSTR2,-(SP)
                       000000G
    001436
             016746
348
349
    001442
                                                   CALL
                                                             STOP
                                                   MOV-
                                                             CODE,-(SP)
                                                                                         :SELECT : MEMORY :
350
    001446
             016746
                       176400
                                                                                         :WRITE SELECTION TO CONTROL REG
                                                    CALL
                                                             PPCR
    001452
351
                                                   CALL
MOV:
                                                             PPI B
352-001456
                                                             (SP)+,DATA1
                                                                                         :GET-WORD-FROM-FAL
353
    001462
              012667
                       000000G
                                                             PRDATA
                                                                                         :PRINT-IT-
                                                    CALL
354 001466
355 001472
                                                             #Q$CLR,-(SP)
                                                    MOV:
              012746
356
    001476
                                                   CALL
                                                             PPCR
                                                                                         :ADVANCE ADDRESS : :HAS UPPER MEMORY LIMIT BEEN REACHED:
                                                    ADD
                                                             INCVAL, MSTR2
                       000000G - 000000G
    881582
              866767
358
              026767
                       000000G - 000000G
                                                    CMP
                                                             MSTR2, MEND.
    001510
359
                                                                                         ;NO, CONTINUE:
;LOOP-ON:?
;YES, CONTINUE:
;YALUE:FOR QCL:POINTER:
                                                    BLOS
                                                             1$
360
    001516
              101747
                                                    BIT.
                                                             #LOOP, BASE
                       000000G - 000000G
              032767
361
    001520
                                                    BHE
                                                             2$
    001526
              001006
362
                                                             #077777,-(SP)
                                                    MOV
    001530
                       077777
                                                                                          :LOAD QCL POINTER
                                                             STOP
                                                    CALL
364
    001534
                                                    JMP
                                                             PR4X
                                                                                         :EXIT
    001540
              000167
                       000414
365
                                                                                         ; INIT START ADDRESS
                                                             MSTRT, MSTR2
              016767
366
    001544
                        000000G-000000G-2$:
                                                    MOV:
                                                                                          : AND . REPEAT . PRINT ...
    001552
              000731
                                                    BR
                                                             1 $
368
369
                                                    PRINT.FROM.QLB.REFERENCE.PAGE
370
371
372
                                           PR40R::
     001554
373
                                                                                          SUPPLY MEMORY UPPER LIMIT
                                                              LHHIGH,-(SP)
     001554
                        000000G
                                                    MOV-
              016746
374
                                                                                          :LOWER · LIMIT ·
                                                    MOV.
                                                              LHLOW,-(SP)
     001560
              016746
                        000000G
                                                              BUESET:
                                                                                          ; PREPARE · FOR · LOAD
                                                    CALL
376
377
     001564
                                                    BCC.
                                                                                          OK, CONTINUE
               103012
     001570
                                                    MOV.
                                                              #Q$QHLT,-(SP)
                                                                                          :HALT-
                        000013
378
     001572
              012746
 379
379
     001576
                                                    CALL
                                                              PPCR
                                                                                          :X14001 = · ILLEGAL · ADDRESS
                                                              #2000,-(SP)
               012746
                        002000
                                                    MOV.
     001602
                                                                                          :SEND - TO - HP
                                                    CALL
                                                              LBPP
 381
     001606
               000167
                        000342
 382
     001612
 383
                                                                                          :SELECT ADDRESS FOR QLB PAGE
                                                              #Q$QLA,-(SP)
                                                    MOV.
     001616
 384
               012746
                                                                                          : WRITE - SELECTION - TO - CONTROL - REG
                                                    CALL
                                                              PPCR
     001622
                                                                                          LOAD ADDR INTO OCL POINTER
                                                     MOV.
                                                              MSTR2,-(SP)
 386
     001626
               016746
                        000000G
                                                     CALL
                                                              LBPP
 387
     001632
                                                                                          ;SELECT-QLB-REF-PAGE
     001636
                                                     MOV.
                                                              #Q#QLR,-(SP)
 388
               012746
                        000001
                                                              PPCR
                                                     CALL
 389
     001642
                                                                                          :DO-PPS-TO LOD-BUS-
:GET-WORD-FROM-FAL-
                                                     CALL
 398
     001646
 391
     001652
               012667
                        000000G
                                                     MOV-
                                                              (SP)+,DATA1
                                                     CALL
                                                              PRDATA.
                                                                                          :PRINT-IT
 393
                                                                                          :ADVANCE:ADDRESS:
:HAS:UPPER MEMORY:LIMIT:BEEN:REACHED:
                                                              INCVAL,MSTR2
MSTR2,MEND
                        000000G · 000000G ·
                                                     ADD.
 394 001662
               066767
 395
     001670
               026767
                        000000G - 000000G -
                                                     CMP
                                                                                           LUDP ON THE
                                                     BLOS
                                                              1$
396
               101747
     001676
               032767
                                                              #LOOP,BASE
                        000000G · 000000G
                                                     BIT.
 397
     001700
001706
                                                                                          :YES, CONTINUE:
                                                     BHE
                                                              24
               001012
 398
                                                              #Q$QHLT<u>.</u>-(SP)
 399
     001710
               012746
                        000013
                                                     MOV
                                  Approved For Release 2005/07/12 A-RDP85-00514R000200020001-3
```

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The

PPPR-

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457 002160 458 002164 459 002170 460 002176 461 002202

000000C · 000000G

000167 000000G

MOV CALL BIC CALL JMP

#Q\$CLR,-(SP)
PPCR
#<ONCE+OUT>,BASE+
KILL
PPSXX+

;CLEAR·PPS

:CLEAR-PRINT-CONTROL FLAGS::M :KILL-AST-(IF-THERE-WAS-ONE)

```
PPPR-
              0 M1110 27-MAR-80 15 24 PAGE For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
     463
     464
     465
                                                         LOAD CP DATA MEMORY
                                                ;
    466
     467
     468
         002206
                                               LOADCD:
    469 002206
470 002214
                   012767
                             000003
                                      176424
                                                         MOV
                                                                   #Q$LDCD, DR$LBR
                                                                                               :MOVE-ATTN CODE-TO-LOD-BUS-REG
                            120100
176422
                   012767
                                      176422
                                                                   #<Q$ATTN+Q$SM+Q$ENOP>,QR$CR2:;SET ATTN CODE READY
                                                         MOV
         002222
                   016701
                                                1$:
                                                         MOV
                                                                   QR$CR2,R1
                                                                                               ;READ CSR2
;ATTN CLEAR
    472.002226
                   032701
                             000100
                                                         BIT
                                                                   #Q$ATTH,R1
     473
         002232
                   001373
                                                         BHE
                                                                   15
                                                                                               ;NO, READ AGAIN
     474
     475
         002234
                   016767
                             175604
                                      176424
                                                                  YOM
         002242
002250
002254
     476
477
                   012767
                             120040
                                      176422
                                                         MOV.
                   016701
                             176422
                                               2$:
                                                         MOV.
     478
                   032701
                             000040
                                                         BIT
     479
         002260
                   001373
                                                         BNE
                                                                  2$
                                                                                               :NO, READ AGAIN
     480
                                                                  #i,QR$LBR· ;TRANSFER·COUNT = i WORD·
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET·CC·TO·CP·
QR$CR2,Ri ;READ CSR2
#0$CCCP,Ri ;IS·CC·TO·CP·CLEAR·
         002262
002270
     48 i
                   012767
                             000001
                                      176424
                                                         MOV
     482
                   012767
                            120040-
176422
                                      176422
                                                         MOV
     483
         002276
                   016701
                                               3$:
                                                         MOV:
     484
         002302
                   032701
                             000040
                                                         BIT.
     485
         002306
                   001373
                                                         BNE
                                                                  3:5
                                                                                               :NO. READ AGAIN
     486
     487
         002310
                   012767
                            0000461
                                      176424
                                                                  #CDDAT,QR$LBR: ;CC:MEMORY DATA:BUFFER
#<Q$CCCP+Q$SM+Q$ENOP>,QR$CR2:;SET:CC:TO:CP:
                                                         MOV
     488
         002316
                   012767
                             120040
                                      176422
                                                         MOV-
    489
    490
                                                         WAIT-FOR-INTERRUPT-FROM-CP
     491
     492 -
         002324
                                                         WTSE$S . #EFN.3
    493
     494
         002336
                                                         CLEF$S - #EFN.3
    495
    496
                                                         RE-ARM INTERRUPTS
    497
    498
         002350
                   005267
                            175470
                                                         INC
                                                                                               :BUMP · CP · DATA · MEMORY ADDRESS .
    499
         002354
                   012767
                            100400
                                      176422
                                                        MOV.
                                                                  #<Q$SM+Q$CHB>,QR$CR2.
                                                                                               CLEAR INTERRUPT (USE HIT BUFFER INT)
         002362
002370
    500
                   012767
                             101000
                                      176422
                                                                  #<Q$SM+Q$REBK>,QR$CR2
    501
                  012767
                            160000
                                      176422
                                                                  #<Q$SM+Q$ENBK+Q$ENOP>,QR$CR2 ;ENABLE
    502 - 002376
                                                         RETURN.
    503
    504
                  000001
                                                         .END
                                                                                                                                1.7
```

```
MACRO M1110 27-MAR-80 15.24 PAGE For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL TABLE
ALUCKE= 040000
                                BYTE4 = 0000004
                                                                 BYTE91=-000133
                                                                                                 MAROUT= 000002
                                                                                                                                  Q$CLR.=.000040
ALUOE - 004000
A01 - 010000
BASE - *******
                                                                 BYTE92= 000134
                                 BYTE40= 000050
                                                                                                                                  Q$CNC = 030000
Q$CP = 000060
                                                                                                 MAR.LO= 002000
MAR.OU= 000040
MBKALL= 001000
                                BYTE41 = .000051
                                                                 BYTE93= 000135
                                BYTE42= 000052
                                                                 BYTE94= 000136
BYTE95= 000137
                                                                                                                                  Q$CPCC= 000010;
BINWD · = · ******
                    GX:
                                BYTE43= 0000053
                                                                                                 MBKCLK= 000400
MEND = ******
                                                                                                                                  Q$CP2·=·000260
Q$CSC·=·010000
BITVAL= 000000
                                BYTE44= 000054
                                                                 BYTE96= 000140
                                                                                            BIT0 = 000001
                                BYTE45= 000055
                                                                 BYTE97=-000141
                                                                                                                                  Q$CSEL=-000360
Q$CSET=-000002
Q$CSP-=-020000
        = 0000002
BITI
                                BYTE46= 000056
                                                                 BYTE98= 000142
BIT10
        = -002000
                                BYTE47= 000057
                                                                 BYTE99= 000143
BYTVAL= 000144
CBKALL= 001000
        = 004000
BITII
                                BYTE48= 000060
                                                                                                                                  Q$DMA---000001
        = 010000
BIT12
                                BYTE49=-000061
                                                                                                                                  Q$ENBK = . 040000
Q$ENOP = . 020000
BIT13 = 020000
                                BYTE5 = 000005
                                                                 CBKCLK= 000400
BIT14
        = 040000
                                BYTE50= 000062
                                                                                                                                  Q$FAL = 004000
Q$FC = 000045
                                                                 CDADD
                                                                            000044R
        = 100000
BIT15
                                 BYTE51=-000063
                                                                 CDDAT
                                                                                            002 MRPCR - = - ****** GX
MSTRT - = - ***** GX
                                                                            000046R
        = 0000004
BIT2.
                                BYTE52 = 000064
BYTE53 = 000065
                                                                 CHOBRE = 100000
                                                                                                                                        = 000044
= 000046
                                                                                                                                  Q$FO
          000010
                                                                 CODE -
                                                                            000052R
                                                                                            002 · MSTR2 · = · *****
                                                                                                                                  O$FP
BIT4
        = 000020
                                BYTE54= 000066
                                                                 CPCCEN= 010000
CPCR = ******** GX
                                                                                                 MSYN. = 0000040
                                                                                                                                  Q$HBF - = - 000002
                                BYTE55=-000067
BYTE56=-000070
BYTE57=-000071
BIT5
        = 0000040
                                                                                                                                  Q$1CP -- .000006.
Q$1HB -- 000003
Q$1HRL- 000002
                                                                                                          = 000144
BIT6
        = 000100
                                                                                                 ONCE
                                                                 CPREAD= 040000
                                                                                                          = · ***** GX
                                                                 CPWRTE = 020000
CSADRD = 000004
                                                                                                          = · ****** GX ·
                                                                                                 OUT:
BITS
        = .000400
                                BYTE58= 000072
                                                                                                 PACK -
                                                                                                          = · ****** GX
                                                                                                                                  Q$IMRP= 000007
BIT9 = 001000
BUFSET= >>>>>>>>
                                BYTE59=:000073
                                                                 CSEQCI = 100000
                                                                                                                                 Q$LBD = 001000
Q$LBDP = 001001
Q$LBP = 000001
                                                                                                 PFAL .
                                                                                                            001404R
                                                                                                                             002
                                                                 BYTE6 = 000006
                                                                                                 PGSEL2 001764R
BYTE0 = 000000
BYTE1 = 000001
BYTE10= 000012
                                                                                                                             002
                                BYTE60= 000074
                                                                 CSR1 = ****** GX*
CSWRTE = *000100
DATA1 = ****** GX*
                                                                                                 PLB.
                                                                                                          = - 000010
                                BYTE61 = . 000075
                                                                                                 PLC
                                                                                                            000020
                                                                                                                                  Q$LDCD=-000003
                                BYTE62=:000076
BYTE63=:000077
                                                                                                 PLD.
                                                                                                          - 0000030
                                                                                                                                  Q$LDMD= 000004
BYTE11= 000013
                                                                 DBR.RD= 000001
DB$CPP= 001457
                                                                                                 PLRWR - = - 000200
                                                                                                                                  Q$LDPP = ⋅ AA2AAA
BYTE12= 000014
BYTE13= 000015
                                BYTE64= 000100
                                                                                                 PLR:EN= 000200
                                                                                                                                  Q$LHP·=·010000
                                BYTE65=-000101
BYTE66=-000102
BYTE67=-000103
                                                                 DB$SPT= 000026
                                                                                                                            Q$MNC = 140000
Q$MR = 000052
002 Q$MRP = 000040
                                                                                                 PPCR -
                                                                                                         = · ******* GX · = · ******** GX ·
BYTE14= 000016
                                                                 DB$TPC= 000023
DISPGS= 100000
                                                                                                 PPLB.
BYTE15= 000017
BYTE16= 000020
                                                                                                 PPPR4
                                                                                                            000054RG
                                BYTE68=-000104
BYTE69=-000105
BYTE7 =-000007
                                                                 DMAAUR = . 000005
                                                                                                 PPSXX-
                                                                                                                            Q$MRP2=-000240
002-Q$MSC-=-040000
Q$MSET=-000004
                                                                                                            жжжжжж БХ
BYTE17= 000021
                                                                 DMARRD= 000003
                                                                                                            000360R
                                                                                                 POEX
BYTE18= 000022
                                                                 DMARWR= . 000004
                                                                                                            жжжжжж БХ
                                                                                                 PRDATA=
BYTE19= 000023
BYTE2 = 000002
                                                                 EFN.3 = ****** GX
ENBR = 010000
                                BYTE70= 000106
                                                                                                 PR4FC
                                                                                                            001366RG
                                                                                                                             002 · Q$MSP · = · 100000
                                BYTE71=-000107
                                                                                                 PR4F0
                                                                                                            001376RG
001356RG
                                                                                                                             002 · Q$NCLK = · 176000
BYTE20= 0000024
                                                                 ERR11 = ****** GX
ERR4 = *****
                                BYTE72= 000110
BYTE73= 000111
                                                                                                 PR4FP
                                                                                                                             002.Q$PP = 000100
BYTE21= 000025
                                                                                                                             002 · Q$PPSW= · 000320
002 · Q$PP2 · = · 000300
                                                                                                 PR4LH-
                                                                                                            000044 G
BYTE22= 000026
BYTE23= 000027
                                BYTE74= 000112
                                                                 ERR5
                                                                         = ***** GX
                                                                                                 PR4QL
                                                                                                            000352RG
                                BYTE75= 000113
                                                                         =·*********** GX
                                                                 ERR7
                                                                                                 PR40R
                                                                                                            001554RG
                                                                                                                             002.Q$QHLT=.000013
BYTE24= 000030
                                BYTE76= 000114
BYTE77= 000115
                                                                 FAHIGH= ******* GX
                                                                                                 PR40W
                                                                                                            000342RG
                                                                                                                             002·Q$QL = 000043
002·Q$QLA·= 000053
BYTE25= 000031
                                                                 FALOW: = · ****** GX
                                                                                                 PR400
                                                                                                                                                      THE TOTAL THE TOTAL
                                                                                                            001744RG
BYTE26=-000032
BYTE27=-000033
                                BYTE78= 000116
                                                                 FIND: = ******* GX
HANG: = ****** GX
                                                                                                 PR401
                                                                                                            001752RG
                                                                                                                                 .Q$QLB. = .000054
                                                                                                                                                              BYTE79= 000117
BYTE8 = 000010
                                                                                                                            PR402
                                                                                                            001760RG
BYTE28=:000034
                                                                 INCVAL = - ********
                                                                                                  PR4TBL
                                                                                                            ийийийи в с
BYTE29= 000035
                                                                 KILL · = · ******* GX
LBPP · = · ****** GX
                                BYTE80= 000120
                                                                                                 PR4X
                                                                                                            002160R
BYTE3 = 000003
                                BYTE81= 000121
                                                                                                 OR$CRi= 176420
                                                                                                                                  ี่ @$REBK= 001000 *****
| 0$REBK= 001000 *****
BYTE30= 000036
BYTE31= 000037
                                BYTE82= 000122
                                                                 LHHIGH= ********* GX
                                                                                                 QR$CR2= 176422
                                                                 LHHIGH=: ********** GX
LHLOW:=: ******** GX
LCADCD: 002206R:
LOC.EN=: 000100
LOC.WA=: 040000
                                BYTE03=-000123
                                                                                                 QR$LBR= 176424
                                                                                                                            Q$RNC - = .006000
002 · Q$RSC - = .004000
BYTE32= 000040
                                BYTE84= .000124
                                                                                                 QXCNT 000050R
QXHIGH= ****** GX
                                                                                            002 · QXCHT
BYTE33=-000041
                                BYTE85 - 000125
                                                                                                                                  Q$RSET= 000010
BYTE34= 000042
BYTE35= 000043
                                BYTE86= 000126
                                                                                                                                  Q$SM = 100000
Q$SP = 000120
                                                                                                 QXLOW---жжжжжж GX
                                                                 LOC.WB= 100000
LOOP = ******* GX
                                BYTE67 = . 000127
                                                                                                  Q$ATTN= 000100
                                BYTE88= 000130
                                                                                                 Q$BCL -- 000001
Q$CCCP= 000040
                                                                                                                                  BYTE37= 000045
                                                                 MAREN1 = 000001
                                BYTE89= 000131
BYTE38= 000046
                                             BYTE9 = 000011
BYTE39= 000047
                                BYTE90= 000132
```

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27-MAR-80 15:24 PAGE 6-2
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
PPPR-
                 0 · M1110
SYMBOL . T
SCAN-
        = - ******
                                   T$CLK - - - 002000
                                                                     WORD1 = 0000002
                                                                                                      WORD40= 000120
WORD41= 000122
                                                                                                                                         WORD71=-000216
SELPG = ******* GX SEQCS = ******* GX
                                  T$DISK= 000200
T$DRD = 000004
                                                                     WORD10- 000024
                                                                                                                                         WORD72=
                                                                                                                                                    000220
                                                                    WORD11=-000026
WORD12=-000030
                                                                                                       WORD42= 000124
                                                                                                                                         WORD73= 000222
WORD74= 000224
SEQMM = ****** GX
                                   T$EMEM= 010000
                                                                                                       WORD43= 000126
SEQ.CI= 000010
STQP = ******
                                   T$FSAA= 000000
                                                                     WORD13= 0000032
                                                                                                                                         WORD74= 000224
WORD75= 000226
WORD76= 000232
WORD77= 000232
WORD78= 000234
                                                                                                      WORD44= 000130
WORD45= 000132
        = · ******** GX
                            T$FSAB= 000004
002 T$FSAC= 000014
                                                                     WORD14= 000034
STRTMC.
           000612R
                                                                     WORD15= 000036
WORD16= 000040
WCRD17= 000042
                                                                                                       WORD46=-000134
S$CLR⋅=
           000000
                                   T$FSB2=-000010
                                                                                                       WORD47=-000136
S≴LA⊹
S$QB÷
                                   T$IB· = 000026
           000001
                                                                                                       WORD48= 000140
                                                                                                                                         WORD79=-000236
           000005
                                   T$IBAR= 000024
                                                                     WORD18= 000044
                                                                                                       WORD49 - 000142
                                                                                                                                         WORD8 - 000020
                                  T$IBE - = - 020000
T$IBF - = - 040000
S$QR
           000006
                                                                     WORD19= 000046
WORD2 = 000004
                                                                                                       WORD5 = 000012
                                                                                                                                         WORD80= 000240
S$0X.
           000004
                                                                                                                                         WORD80--000240
WORD81=<u>.</u>000242
WORD82=-000244
                                                                                                       WORD50= 000144
S$SR

    8888887

                                   T$ICD - = - 000040
                                                                     WORD20 = . 000050
                                                                                                       WORD51= 000146
S$S1
           000010
                                   T$MODE=-004000
                                                                     WORD21=-000052
                                                                                                       WORD52= 000150
                                                                                                                                         WORD83 = . 000246
S$S2
           000014
                                                                    WORD22= 000054
WORD23= 000056
                                   T$0B · = · 000036
                                                                                                       WORD53= 000152
                                                                                                                                        WORD84= 000250
WORD85= 000252
TD$CTR=-176370
                                   T$0BE · = · 004000
                                                                                                       WORD54= 000154
TD$CTW= 176360
TD$INL= 004000
                                   T$OBF·≕-010000
                                                                     WORD24= 000060
                                                                                                                                         WORD86= 000254
WORD87= 000256
                                                                                                      WORD55= 000156
WORD56= 000160
                                   T$0BRA=.000034
                                                                     WORD25-000062
TD$MEM= 000270
                                   T$0BWA= 000032
                                                                    WORD26=-000064
WORD27=-000066
                                                                                                       WORD57=-000162
                                                                                                                                        WORD88= 000260
WORD89= 000262
TD$0AR= 176344
TD$0TR= 176346
                                   T$0UTA= 100000
                                                                                                       WORD58= 000164
                                  T$RBD0=-000200
T$RNB---000040
T$RSET--040000
                                                                     WORD28= 0000070
                                                                                                      WORD59=-000166
WORD6 =-000014
                                                                                                                                         WORD9 - 000022
TD$QRD= 000274
                                                                    WORD29=-000072
WORD3 =-000006
WORD30=-000074
                                                                                                                                         WORD90= 000264
WORD91= 000266
TD$SW-=-176376
TD$TAR=-176372
                                                                                                       WORD60= 000170
                                  T$SC -- 0000022
T$SCLK -- 020000
                                                                                                      WORD61= 000172
WORD62= 000174
WORD63= 000176
                                                                                                                                         WORD92= 000270
TD$TAW= 176362
                                                                     WORD31= 000076
                                                                                                                                         WORD93= 000272
TD$TDR= 176374
                                   T$SEG1=:000000
                                                                    WORD32=-000100
WORD33=-000102
                                                                                                                                         WORD94= 000274
WORD95= 000276
TD$TDW≕-176364
                                   T$SEG2= 0000001
                                                                                                       WORD64= 000200
T$AD· = 000020
T$BA· = 000002
                                   T$SEG3=-000002
                                                                     WORD34= 000104
                                                                                                      WORD65= 000202
                                                                                                                                         WORD96= 000300₩
                                  T$SO· = 0000001
                                                                     WORD35= 000106
                                                                                                      WORD66=-000204
                                                                                                                                         WORD97=-000302
                                  T$UBUS= 100000
                                                                    WORD36=-000110
WORD37=-000112
                                                                                                       WORD67= 000206
                                                                                                                                         WORD98= 000304
T$BSO -- 100000
T$BT -- 000020
                                   T$1CLK= 000400
                                                                                                      WORD68= 000210
                                                                                                                                         WORD99= 000304
                                   T$8BEN= 0000020
                                                                     WORD38=-000114
                                                                                                      WORD69= 000212
WORD7 = 000016
                                                                                                                                         WRDVAL = . 000310
T$BTAR= 0000030
                                  UBD: IN= 000020
                                                                     WORD39= 000116
                                                                                                                                         XTREAD= 001000
T$BTD - = - 002000
                                  WORD0 = 000000
                                                                                                      WORD70= 000214
                                                                     WORD4 - 000010
                                                                                                                                         XTURTE = . 000400
T$CD: =:000100
           ававав
. ABS.
                           000
           000000
                           001
PPPP
           002400
ERRORS · DETECTED:
VIRTUAL MEMORY USED:
                              3651 WORDS: (-15 PAGES)
DYNAMIC MEMORY: 4916 WORDS: (18 ELAPSED TIME: 00:00:56 PPPR,PPPR/-SP=[20,1]IM,[20,1]PPPR
                                         ( 18 PAGES)
```

```
PPREST-
                                0 M1110 27-MAR-80 15 Approved for Release 2005/07/1 CIA-RDP85-00514R000200020001-3 ∰
                                                                                                                                       .FITLE--PPREST-
              i 234567890
                      000000
                                                                                                                                      .PSECT PPREST
                                                                                                                                     HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
                                                                                                                                     PIPELINE PROCESSOR TEST ROUTINES
                                                                                                                                     COMMANDS:
                                                                                                                                                           STORE INTO A PP REGISTER
READ FROM A PP REGISTER SWITCH QLB PAGES
                                                                                                                                     ST
                                                                                                                                     ŘĖ
              11
12
                                                                                                                                     ER
                                                                                                                                                           ERASE MEMORIES
              13
              14
15
                                                                                                                                     ONCE - A - COMMAND - HAS - BBEN - EXECUTED (OR : AN - ERROR - ENCOUNTERED) THIS - MODULE - RETURNS - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - MODULE - PPS - AT - EOCATION - CONTROL - TO - THE - THE - TO - THE - TO - THE - THE - TO - THE - THE - TO - THE - TO - THE - THE - THE - TO - THE - THE - THE - THE - THE - THE - TO - THE - TH
               16
                                                                                                                                      'PPSXX'.
              17
18
19
             20
21
22
23
24
25
                                                                                                                                     TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE
                                                                                                                                     ADDRESSES:
                      000000
                                                                                                               ST4TBL::
                      000000
                                                                           122
                                                                                                                                      .ASCII
                                                                                                                                                            ZCRZ
                                                                                                                                                                                                                              ; PPS · CONTROL · REGISTER
                      000002
                                            0001701
                                                                                                                                     . MORD
                                                                                                                                                           ST4CR-
              26
                      000004
                                                     121
                                                                            120
                                                                                                                                      .ASCII
                                                                                                                                                            ZQPZ
                                                                                                                                                                                                                              ; QCL · POINTER
            000006
                                            000202
                                                                                                                                       .WORD
                     000010
                                                     115
                                                                            122
                                                                                                                                      ASCII.
                                                                                                                                                            ZMR Z
                                                                                                                                                                                                                              : MASK - REGISTER
                     000012
                                            0002141
                                                                                                                                      .WORD
                                                                                                                                                           ST4MR
                                            121
000236
                                                                            122
                                                                                                                                      .ASCII
                                                                                                                                                           /QR/
                                                                                                                                                                                                                              :PPS-Q-REGISTER
                      000016
                                                                                                                                      .WORD
                                                                                                                                                           ST40R
                                             000004
                                                                                                               ST4LH
                                                                                                                                                           <.-ST4TBL>/4
                                                                                                                                     TABLE OF VALID REGISTER MNEMONICS AND ASSOCIATED ROUTINE ADDRESSES
                      000020
                                                                                                               RE4TBL::
              39
                                                                                                                                     .ascil.
                                                                                                                                                           28hlZ
                                                                                                                                                                                                                              ;STATUS WORD
              40
                                            000360
                      000022
                                                                                                                                                           RE4SW-
                                                                                                                                      .WORD
             41
42
43
44
45
                                            000001
                                                                                                               RE4LN.
                                                                                                                                                            <.-RE4TBL>/4
                                                                                                                                     ERASE
                      000024
                                                                                                               ER4TBL::
              46
                      000024
                                                     106
                                                                           103
                                                                                                                                     .ASCII
.WORD
                                                                                                                                                                                                                              ;FAL · COUNTER · MEMORY ·
              47
                      000026
                                            000600
                                                                                                                                                           ER4FC
              48
                     000030
                                                     121
                                                                           122
                                                                                                                                      .ASCII
                                                                                                                                                           /QR/
                                                                                                                                                                                                                              ;QLB · REF · PAGE
              49
                      000032
                                            000744
                                                                                                                                      .WORD
                                                                                                                                                           ER4QR
             50
                      000034
                                                     121
                                                                           060
                                                                                                                                       ASCII
                                                                                                                                                            /00/
                                                                                                                                                                                                                               :QLB-PAGE-0
             51
52
                      000036
                                            0011023
                                                                                                                                      .WORD
                                                                                                                                                           ER400
                     999949
                                                     121
                                                                           061
                                                                                                                                      .ASCII
                                                                                                                                                            /01/
                                                                                                                                                                                                                              :QLB - PAGE
             53
                     000042
                                            001106
                                                                                                                                      .WORD
                                                                                                                                                           ER401
             54
                     000044
                                                     124
                                                                          062
                                                                                                                                      .ASCII
                                                                                                                                                          /02/
ER402
                                                                                                                                                                                                                               :QLB-PAGE-2
             55
56
                     000046
                                                                                                                                     .WORD
                                            000005
                                                                                                              ER4LH
                                                                                                                                                           <.-ER4TBL>/4
                                                                                            Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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PPREST MACRO M1110 27-MAR-80 15 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
       58
       59
                                                                 STORE
      60
                                                                 PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
PP:ST @ CR
      61
62
63
64
                                                                 PARSE THE '0'
      65
66
          000050
                                                      ST4::
       67
           000050
                                                                 CALL
BCC
                                                                            FIND
                                                                                                             :FIND-A-OPERAND-IN-COMMAND-LINE
      68
69
          000054
000056
                      103004
                                                                            1$
                                                                                                             OK, CONTINUE
                                                                                                             :NOTHING THERE
:RETURN TO TOP OF LOOP (PROMPT)
:CONVERT VALUE IN COMMAND LINE TO BINARY
                                                                  CALL
                                                                            ERR4
      70
71
72
73
          000062
                      000167
                                000176
                                                                  JMP .
                                                                             ST4X
          000066
                                                      1$:
                                                                 CALL
                                                                            PACK
          000072
000074
                      103004
                                                                 BCC.
                                                                            2$
                                                                             ĒRR5
                                                                 CALL
      74
75
76
77
78
79
           000100
                      000167
                               ยียียี 160
                                                                 JMP
                                                                 CONTINUE - PARSING -
                                                      ż
                                                                 FIND THE REGISTER MNEMONIC IN THE COMMAND LINE
          000104
000110
                                                      2$:
                                                                 GALL
                                                                            FIND
                                                                                                             :LOCATE · A · NON-BLANK
      80
                      103004
                                                                 BCC.
                                                                            3$
      81
          000112
                                                                 CALL
                                                                            ĒRR4
      82
83
84
          000116
                     000167
                                000142
                                                                 JMP -
                                                                            ST4X
                                                                 MATCH: THE: MNEMONIC: FROM: THE: COMMAND: LINE: AGAINST: THE
      85
                                                      ÷
                                                                 TABLE OF VALID MNEMONICS.
      86
87
          000122
000126
                     012700
                                000004
                                                                 MOV
                                                                            #ST4LN,R0
                                                                                                             :NUMBER OF TABLE ENTRIES
      88
                     012702
                                000000
                                                                 MOV.
                                                                            #ST4TBL,R2
                                                                                                             :R2.-> TABLE:
:LOOK:FOR:REG:MNEMONIC
      89
           000132
                                                                 CALL
                                                                            SCAN
      90
91
92
          000136
                      103004
                                                                 BCC -
                                                                            4$
                                                                                                             :OK, CONTINUE
          000140
                                                                 CALL
                                                                            ERR6
                     000167
          000144
                                000114
                                                                            ST4X
      93
      94
95
                                                                 SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE REGISTER, R1 -> ROUTINE ADDRESS. CALL ROUTINE TO SCAN COMMAND LINE FOR LOOP INDICATOR.
      96
      97
98
99
                                                                 EG. PP)ST-0 CR:L:
LOOP:FLAG:WILL:BE:SET:IF:INDICATOR:IS:PRESENT:
JUMP:TO:ROUTINE:TO:LOAD:REGISTER.
     100
     101
          000150
                     010167
                                000000G
                                                      4$:
                                                                 MOV:
                                                                            R1.RTNPT.
                                                                                                             ;SAVE · POINTER · TO · RTN
     102
          000154
                                                                 CALL
                                                                            LOOPR RTHPT, R1
                                                                                                             ;L00P?
     103
          000160
                     016701
                                                      ST4IN:
                                                                 MOV.
                                                                                                             : POINT . TO . ROUTINE
     104
          000164
                                                                                                                                                                      PART OF THE
                     000171
                                000000
                                                                            @(R1)
                                                                                                             :EXECUTE ROUTINE
     105
     106
     107
                                                                 PPS-CONTROL-REGISTER
     108
     109
          000170
                                                      ST4CR::
     i i Ø
          000170
                     016746
                                                                 MOV
                                                                            BINWD,-(SP)
PPCR
                                                                                                             :DATA FOR LOD BUS REG
          000174
     111
                                                                 CALL
                                                                                                            :WRITE TO CONTROL SEC
          000200
                     000423
                                                                 BR
                                                                            ST4LP
    113
114
```

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QCL · POINTER

PO M1110 27-MAR-80 15:25 PAGE 5-2 Release 2005/07/1 CIA-RDP85-00514R000200020001-3 PPREST-115 116 000202 117 000202 ŚT4QP:: ;WORD·FOR·QCL·POINTER· ;LOAD·QCL·POINTER· 016746 000000G MOV. BINWD, - (SP) 118 000206 CALL STQP ST4LP 119 000212 000416 BR :TEST-FOR-LOOP-120 121 122 123 LOAD MASK REGISTER 000214 124 000214 125 000220 #MASK-RÉGISTER-SELECT-FOR-PP-CR-#LOAD-PP-CONTROL-REG #WORD-FOR-MASK-REGISTER-#SEND-MASK WORD-012746 000052 MOV. #0\$MR,-(SP) CALL PPCR 126 000224 016746 000000G MOV-BINWD,-(SP) 127 000230 LBPSC CALL 128 · 000234 129 130 000405 ST4LP :TEST-FOR-LOOP LOAD PPS Q+REG 131 132 000236 133 000236 ST4QR:: 016746 ; WORD · FOR · Q-REG 000000G MOV. BINWD,-(SP) 134 000242 CALL QREG :STORE IT 135 136 000400 000246 BR ST4LP ;TEST-FOR-LOOP 137 138 000256 139 000256 140 000256 ST4LP: #LOOP,BASE 032767 000000G 000000G BIT. :REPEAT:? 001402 000167 ST4X ;NO, EXIT. 177674 JMP -ST4IN-142 143 000264 ST4X: 144 000264 CALL 145 000270 000167 000000G JMP. **PPSXX**

```
PPREST- MACRO M1110 27-MAR-80 15:25
                                                                                                                                        PAGE
                                                                                                                             Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
                147
                148
                149
                                                                                                                                                                                   READ
                                                                                                                                                                                  PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
PP>RECR
PARSE THE CR!
                150
                151
                153
                154
                155
                              000274
                                                                                                                                                    RE4::
                157
                                                                                                                                                                                  CALL
BCC+
                                                                                                                                                                                                               FIND
                                                                                                                                                                                                                                                                                                         ;LOCATE · A · REG · MNEMONIC ·
                158 000300
                                                            103004
                                                                                                                                                                                                                15
                159
                                                                                                                                                                                                                                                                                                                                                                                          000302
                                                                                                                                                                                  CALL
                                                                                                                                                                                                                ĒRR4
                160
                             000306
                                                           000167
                                                                                        000164
                                                                                                                                                                                   JMP
                                                                                                                                                                                                                RE4X
                161
                162
                                                                                                                                                                                  MATCH THE REGISTER MNEMONIC FROM THE COMMAND LINE AGAINST
               163
164
                                                                                                                                                                                  THE TABLE OF VALID MNEMONICS
                 165
                              000312
                                                            012700
                                                                                        000001
                                                                                                                                                                                                               #RE4LN,R0
#RE4TBL,R2
                                                                                                                                                                                                                                                                                                        *NUMBER OF TABLE ENTRIES 

*R2 -> TABLE 

*LOOK FOR REG MNEMONIC.
                                                                                                                                                     1$:
                                                                                                                                                                                  MOV
               166
167
                             000316
                                                            012702
                                                                                                                                                                                  MOV.
                             888322
                                                                                                                                                                                   CALL
                                                                                                                                                                                                                SCAN
                                                                                                                                                                                                                                                                                                                                                                                                  But William
                168
                             000326
                                                            103004
                                                                                                                                                                                  BCC-
                                                                                                                                                                                                                2$
                                                                                                                                                                                                                                                                                                         OK, CONTINUE
                                                                                                                                                                                                                                                                                                                                                                    - . vir
                169
                             000330
                                                                                                                                                                                  CALL
                                                                                                                                                                                                                ERRE
                                                                                                                                                                                                                                                                                                                                                                       *
                170
                             000334
                                                            000167
                                                                                        000136
                                                                                                                                                                                   JMP
                                                                                                                                                                                                               RE4X
               171
172
                                                                                                                                                                                                                                                                                                                                         TO STATE OF THE ST
                                                                                                                                                                                 SAVE THE POINTER TO THE ROUTINE ASSOCIATED WITH THE REGISTER, R1 -> ROUTINE ADDRESS.
CALL ROUTINE TO SCAN COMMAND LINE FOR LOOP INDICATOR.
               173
174
                175
                                                                                                                                                                                 EG. PP>RE·CR L.
LOOP-FLAG-WILL-BE-SET-IF-INDICATOR-IS-PRESENT.
                177
                                                                                                                                                                                  JUMP TO ROUTINE TO READ REGISTER.
                178
                179
                             000340
                                                            010167
                                                                                        000000G
                                                                                                                                                    2$:
                                                                                                                                                                                  MOV-
                                                                                                                                                                                                               R1.RTNPT
                                                                                                                                                                                                                                                                                                        SAVE POINTER TO RIM
                180
                             000344
                                                                                                                                                                                  CALL
                                                                                                                                                                                                                LOOPR
                                                                                                                                                                                                                                                                                                        :LOOP?
:POINT
                             000350
                                                                                                                                                                                                                                                                                                        POINT TO ROUTINE A
EXECUTE ROUTINE
                181
                                                            016701
                                                                                        000000G-
                                                                                                                                                    REATH:
                                                                                                                                                                                 MOV.
                                                                                                                                                                                                               RTHPT, R1
                182-000354
                                                                                        000000
                                                                                                                                                                                  JMP
                                                                                                                                                                                                               @(R1)
                183
                                                                                                                                                                                                                                                                                                                             184
                185
                                                                                                                                                                                  STATUS · WORD
                186
                             000360
                187
                188
                             000360
                                                            012746
                                                                                        001001
                                                                                                                                                                                  MOV
                                                                                                                                                                                                                #<Q$LBD+Q$LBP>.~(SP)
                                                                                                                                                                                                                                                                                                        :CLEAR DRIVE AND PULSE
                                                            052716
                                                                                        000360
                                                                                                                                                                                 BIS:
                                                                                                                                                                                                                                                                                                        CLEAR SELECT BITS
                                                                                                                                                                                                                #Q$CSEL,(SP)
                198
                             000370
                                                            012746
                                                                                          176000
                                                                                                                                                                                                                #OSNOLK, - (SP)
                                                                                                                                                                                                                                                                                                         :SET NO-CLOCKS
                191
                             000374
                                                           052716
                                                                                        000320
                                                                                                                                                                                                                #Q$PPSW,(SP)
                                                                                                                                                                                                                                                                                                        READ PPS STATUS WORD
                             000400
                                                                                                                                                                                  CALL
                                                                                                                                                                                                                CSR1
                193
                             000404
                                                            016701
                                                                                                                                                                                 MOV.
                                                                                                                                                                                                               QR$LBR,R1
                194
                             000410
                                                           042701
                                                                                                                                                                                  BIC
                                                                                                                                                                                                                #177774.R1
                                                                                                                                                                                                                                                                                                         :CLEAR ALL BITS EXCEPT LOW 3
                195
                196
                             000414
                                                           012746
                                                                                        000320
                                                                                                                                                                                 MOV.
                                                                                                                                                                                                                #Q$PPSW,-(SP)
                                                                                                                                                                                                                                                                                                        :CLEAR·PP·STATUS·REQUEST-
                197
                             000420
                                                           005046
                                                                                                                                                                                  CLR.
                                                                                                                                                                                                                -(SP)
                                                                                                                                                                                                                                                                                                        :SET - NOTHING -
               198
                             000422
                                                                                                                                                                                                               CSR1
                                                                                                                                                                                  CALL
               199
                             000426
                                                           000400
                                                                                                                                                                                  BR
                                                                                                                                                                                                               RE4PUT
                                                                                                                                                                                                                                                                                                        :PRINT-AND TEST-LOOP FLAG-
              200
                                                                                                                                                                                                                                                                                                                            TED-ONCE 2
              201
                            000430
                                                                                                                                                    RE4PUT:
              203
                            000430
                                                                                       000000G-000000G-
                                                                                                                            #00000G #0000 #0000 #0000 #0000 #0000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #00000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #0000 #000 #0000 #0000 #0000 #0000 #0000 #000 #0000 #0000 #0000 #0000 #0000 #0000 #000 #0000 #0000 #0000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #000 #0
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204 000436 205 000440 206 000446 001011 :YES, SKIP PRINT. :SET-FLAG-FOR-PRINTED-ONCE: :POINT-TO-PRINT-LINE: :CONVERT-VALUE-IN-R1 FOR-PRINTING-BNE BIS MOV 052767 012705 000000G-000000G #ONCE, BASE 000000G #PRINT,R5 000452 CALL 208 000456 209 CALL CONSOL :PRINT-IT-210 211 212 213 214 215 216 217 000462 032767 001402 000000G 000006G 1\$: BIT. #LOOP,BASE RE4X RE4IN ;REPEAT ? 000470 BEQ. :NO. EXIT-000472 000167 177652 JMP . 000476 ŔE4X: 000476 042767 000000G - 000000G #ONCE, BASE BIC. :CLEAR PRINT CONTROL FLAG 000504 000510 KILL PPSXX CALL JMP: :KILL AST 000167 000000G

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PPREST MACRO M1110 27-MAR-80 15: Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
     249
    220
221
222
                                                ;
                                                         ERASE
     223
         000514
                                               ER4::
    224
225
         000514
                                                         CALL -
BCC -
                                                                   FIND
                                                                                                :FIND A NON-BLANK IN COMMAND LINE
         000520
                   103004
                                                                                                OK, CONTINUE.
                                                                   1$
    226
         000522
                                                          CALL
                                                                   ERR4
     227
                   000167
                            000524
                                                          JMP .
                                                                   ER4X
                                                                                                RETURN TO TOP OF LOOP (PROMP
     228
     229
         000532
                   012700
                            000005
                                                1$:
                                                         MOV
                                                                   #ER4LN,R0
                                                                                               #NUMBER.OF TABLE.ENTRIES
#R2.-> TABLE.
#LOOK.FOR.MNEMONIC.
     230
         000536
                   012702
                            0000241
                                                         MOV-
                                                                   #ER4TBL,R2
         000542
                                                         CALL
                                                                   SCAN
     232
         000546
                   103004
                                                         BCC.
                                                                   2$
                                                                                                OK, CONTINUE.
     233
         000550
                                                                   ERR6
                                                         CALL
     234
         000554
                   000167
                            000476
                                                          JMP
                                                                   ER4X
     235
         000560
000564
     236
                   010167
                             000000G
                                                2$:
                                                         MOV.
                                                                   R1.RTNPT
                                                                                                SAVE POINTER TO RTN
     237
                                                          CALL
                                                                   LOOPR
                                                                                                :L00P?
         000570
                   016701
                             0000006
                                                ER4IN:
                                                         MOV-
                                                                   RTHPT, R1
                                                                                                :POINT TO ROUTINE
     239
         000574
                   000171
                            000000
                                                          JMP.
                                                                   @(R1)
                                                                                                :EXECUTE ROUTINE
     240
     241
     242
243
244
                                                         CLEAR · FAL · COUNTERS
     245
         000600
                                                ER4FC::
     246
                   012746
                            001001
                                                         MOV
                                                                   #<Q$LBD+Q$LBP>,-(SP)
                                                                                                :CLEAR · DRIVE · AND · PULSE
     247
         000604
                   052716
                            000360
                                                         BIS.
                                                                   #Q$CSEL,(SP)
#Q$NCLK,-(SP)
                                                                                                :CLEAR · SELECTION · BITS
     248
         000610
                   012746
                             176000
                                                                                                :SET-NO-CLOCKS-
     249
         000614
                                                         CALL
                                                                   CSR<sub>4</sub>
    250
251
252
                                                         TURN - ON - PPS - CLOCKS
     253
         000620
                   B12746
                            <u>аавааа</u>
                                                         MOV.
                                                                   #Q$RNC,-(SP)
                                                                                                :CLEAR PPS NO-CLOCKS (START PPS)
         000624
                   005046
                                                         CLR
                                                                   -(SP)
                                                                                                :SET - NOTHING -
     255
256
         000626
                                                         CALL.
                                                                   CSR1
     257
                                                         SET-PPS-CONTROL-REGISTER
     258
259
         000632
000636
     269
                   012746
                            000025
                                                         MOV
                                                                   #025,-(SP)
                                                                                               :SET-PPCR-=-X:15
     261
                                                         CALL
                                                                   PPCR
     262
                                                         SET LOD BUS REGISTER = 0 SET LOD BUS DRIVE, SELECT PPS
     263
     264
     265
         000642
                   005067
                             176424
                                                         CLR
                                                                   QR$LBR
     267
         000646
000650
                   005046
                                                         CLR
                                                                   -(SP)
                                                                                                :CLEAR - NOTHING
     268
                   012746
                            001300
                                                         MOV-
                                                                   #<Q$PP2+Q$LBD>,-(SP)
                                                                                                ;SELECT.PPS.AND.SET.DRIVE
         000654
                                                         CALL
                                                                   CSR Ł
    270
271
                                                         SET-FAL-LOD-ON, SET-LOD-BUS-REG, TURN-FAL-LOD-OFF
                                                                                        SET FAL LOD.
WRITE FAL PARK TO LOD BUS REG
    273
         000660
                   012767
                            004000
                                      176422
                                                         MOV
                                                                   #Q$FAL,QR$CR2
    274 000666
                   012767
                                      176424
                                                         MOV
                                                                   #077777,QR$LBR
    275
         000674
                   005067
                            176422
                                        Approved For Release 2005/07/1
                                                                            ■CIA-RDP85-00514R000200020001-3
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0 M1110 27-MAR-80 15 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
PPREST-
    276
277
278
279
                                                         WAIT-2-MS-FOR-FAL-TO-FINISH-
ADD-=-3.17US
DEC-=-2.65US
BNE-=-1.87US
    286
281
    282-000700
                  012701
                            000454
                                                         MOV
                                                                   #300..R1
                                                                                                :EXECUTE:300
                                                                                                               TIMES
    283 000704
284 000706
        000704
                  005000
                                                         CLR
                                                                   RØ.
                                                                                                : ADD - NOTHING
                  060000
                                                1$:
                                                         ADD
                                                                   R0.R0
    285
        999719
                  005301
                                                         DEC
                                                                   R1
     286
        000712
                  001375
                                                         BHE
                                                                   1$
     287
    288
289
                                                         GLEAR LOD BUS DRIVE, DESELECT PPS
    290
         000714
                   012746
                            001300
                                                         MOM
                                                                   #<Q$PP2+Q$LBD>,-(SP)
                                                                                                :CLEAR · DRIVE · AND · DESELECT ·
     291
         000720
                   012746
                             176000
                                                         MOV.
                                                                   #Q$NCLK,-(SP)
                                                                                                :SET NO-CLOCKS
    292 · 000724
293
                                                         CALL
                                                         GLEAR - PP - CR
    295
    296
297
         000730
                   012746
                            000040
                                                         MOV-
                                                                   #Q$CLR,-(SP)
                                                                                                :CODE · FOR · CLEAR
         000734
                                                                   PPCR
    298
         000740
                   000167
                            000312
                                                         .IMP -
                                                                   ER4X
    299
300
301
                                                         CLEAR · QLB · REFERENCE · PAGE
     302
     303
    304
         000744
                                                ÉR40R::
     305 000744
                  012746
052716
                            001001
                                                         MOV.
                                                                   #<Q$LBD+Q$LBP>,-(SP)
                                                                                                ;CLEAR · DRIVE · AND · PHI SF
     306
         000750
                            000360
                                                         BIS:
                                                                   #Q$CSEL,(SP)
                                                                                                :CLEAR · SELECTION · BITS
     307
         000754
                   012746
                             176000
                                                                   #0$NCLK,-(SP)
                                                                                                :SET-NO-CLOCKS
     308
         000760
                                                         CALL
                                                                   CSR1
    309
     310
                                                          TURN - ON - PPS - CLOCKS
    311
    312-000764
                   012746
                            006000
                                                         MOV.
                                                                   #Q$RNC,-(SP)
                                                                                                :CLEAR PPS NO-CLOCKS (START, PPS)
    313
314
315
         000770
000772
                   005046
                                                          CLR.
                                                                                                :SET - NOTHING -
                                                         CALL
                                                                   CSR1
                                                                                                           77.07
    316
317
                                                         SET-PPS-CONTROL-REGISTER
    318
319
         000776
                  012746
                            000141
                                                         MOV
                                                                   #141,-(SP)
                                                                                                :SET-PPCR-=-X1611
         001002
                                                         CALL
                                                                   PPCR
    320
321
                                                          SET-LOD-BUS-REG-=-0
     322
                                                         SET LOD BUS DRIVE, SELECT PPS
     323
         00100E
     324
                   885862
                            176424
                                                         CLR.
                                                                   QR$LBR
                                                                                                :SET.LBR. = 0
     325
         001012
                   005046
                                                         CLR -
                                                                   -(SP)
                                                                                                :CLEAR · NOTHING
         001014
                   012746
                                                                   #<0sPP2+0sLBD>.-(SP)
                                                                                                SELECT PPS AND SET DRIVE
    327
328
329
         001020
                                                         CALL
                                                                                                                  1
                                                                                                         6 194
                                                         SET LHP START, THEN CLEAR
    330
                            010000
                                                                                                :START LHP
    331 001024 012767 010000
332-001032-005067 176422
                                      -176422-
                                                         MOV-
                                                                   #Q$LHP,QR$CR2
                                        Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
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PPREST MACRO M1110 27-MAR-80 15 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
    333
334
335
336
337
                                                           WAIT-2-MS-FOR-LHP-TO-FINISH-
                                                           ADD = 3.17US
DEC = 2.65US
                                                           BNE - = - 1.87US
    338
339
         001036
                   012701
                             000454
                                                           MOV-
                                                                     #300.,R1
                                                                                                  :EXECUTE:300 TIMES:
    340
341
         001042
                   005000
                                                           CLR
                                                                     RØ
                                                                                                  : ADD - NOTH ING
         001044
                   060000
                                                 15:
                                                           ADD
                                                                     R0.R0
     342
         001046
                   005301
                                                           DEC
                                                                     R4
    343
344
         001050
                   001375
                                                           BNE
                                                                     1$
    345
346
                                                           GLEAR LOD BUS DRIVE, DESELECT PPS
         001052
     347
                   012746
                             001300
                                                           MOV-
                                                                     #<Q$PP2+Q$LBD>,-(SP)
                                                                                                  :CLEAR DRIVE AND DESELECT
         001056
                   012746
                             176000
                                                           MOV.
                                                                     #Q$NCLK,-(SP)
                                                                                                  :SET-NO-CLOCKS
    349
350
351
         001062
                                                           CALL
                                                           GLEAR - PP - CR
    352.
353 001066
                                                           MOV
                                                                     #Q$CLR,-(SP)
    354
355
                                                                                                  :CODE · FOR · CL FAR
         001072
                                                           CALL:
                                                                    PPCR
         001076
                   000167
                             000154
                                                                    ER4X
    356
357
358
359
360
                                                           CLEAR · QLB · PAGES
     361
    362
         001102
                                                ER400::
    363
364
         001102
                                                          CLR:
                                                                                                  ;SELECT-PAGE-0
         001104
001106
                   000405
                                                          BR
                                                                    PGSEL3
    365
                                                 ER401::
    366
         001106
                   012746
                             000001:
                                                                     #1,-(SP)
                                                                                                  :SELECT-PAGE-1
    367
368
         001112
                   000402
                                                          BR
                                                                    PGSEL3
         001114
                                                ER402::
    369
         001114
                   012746
                             000002:
                                                                    #2,-(SP)
                                                                                                  :SELECT-PAGE-2-
    370
    37 i
         001120
                                                          CALL.
                                                PGSEL3:
                                                                                                  :SELECT-OLB-PAGE:
:CLEAR-DRIVE-AND-PULSE:
:CLEAR-SELECTION-BITS-
                                                                    SELPG-
    372-001124
373 001130
                   012746
052716
                             001001
                                                          MOV.
                                                                    #<Q$LBD+Q$LBP>,-(SP)
                                                                    #Q$CSEL,(SP)
#Q$NCLK,-(SP)
                             000360
                                                          BIS.
                   012746
         001134
                             176000
                                                           MOV:
                                                                                                  ;SET-NO-CLOCKS
    375
376
         001140
                                                          CALL
                                                                    CSR 1
    377
378
                                                           TURN ON PPS CLOCKS
                                                                                                  :CLEAR PPS NO-CLOCKS (START PPS)
    379
         001144
                   012746
                             006000
                                                          MOV.
                                                                    #Q$RNC,-(SP)
    388
         001150
                   005046
                                                          CLR.
                                                                    -(SP)
                                                                                                  :SET NOTHING
    381
         001152
                                                          CALL
                                                                    CSR1
    382
    383
384
                                                          SET-PPS-CONTROL-REGISTER
         001156 012746
001162
                            000155
                                                          MOV.
                                                                    #155,-(SP)
                                                                                                  :SET.PPCR. = . X:6D:
    386
                                                          CALL
                                                                    PPCR
    387
    388
                                                          SET LOD BUS DRIVE, SELECT PPS.
                                                                                                                               Leaving in the
    389
                                         Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
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AIDQR.TSK $\mathsf{MRLD}_{\,\cdot\,}$

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: MRLD.

R/W-MEM- LIMITS: 072364 073557 001174 00636. DISK-BLK-LIMITS: 000076 000077 000002 00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION.

TITLE . IDENT FILE . .

BLK::(RW.I,LCL,REL,CON) 072364 000000 00000.
MRLD::(RW.I,LCL,REL,CON) 072364 001174 00636.
072364 001174 00636. MRLD:
\$\$ALVC:(RW,D,LCL,REL,CON) 073560 000000 00000.

\$\$RTS : (RW, I, GBL, REL, OVR) 071144 000002 00002.

GLOBAL · SYMBOLS:

LDi - 072374-R - LDiLH - 000002 LD1MD- 073010-R- LD1MM- 072646-R- LD1TBL-072364-R

MEMORY ALLOCATION MAP TYPE ARREST ARR AIDQR.TSK;7 MRPR -

*** SEGMENT: MRPR

R/W-MEM- LIMITS: 072364 073473 001110 00584. DISK-BLK-LIMITS: 000100 000101 000002.00002.

MEMORY-ALLOCATION SYNOPSIS:

SECTION. .

TITLE . . IDENT: FILE . .

BLK::(RW,I,LCL,REL,CON) 072364 000000 000000.

MRPR::(RW,I,LCL,REL,CON) 072364 001106 00582.

072364 001106 00582. MRPR:

\$\$ALVC:(RW,D,LCL,REL,CON) 073472 000000 00000. MRPR.OBJ;1

\$\$RTS : (RW.I.GBL.REL.OVR) 071144 000002 00002.

GLOBAL SYMBOLS:

072374-R: PRILN: 000002 PRIMD: 073062-R: PRIMM: 072662-R: PRITBL:072364-R AIDOR.TSK MRREST.

MEMORY ALLOCATION MADAI TVE FOR Release 2005/07/1 CIA-RDP85-00514R0002000200014-3

*** SEGMENT: MRREST.

R/W-MEM- LIMITS: 072364 073657 001274 00700. DISK-BLK-LIMITS: 000102-000103-000002-00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION, .

TITLE .. IDENT: FILE ..

BLK,:(RW.I,LCL,REL.CON) 072364 000000 00000.

MRREST: (RW.I)LCL,REL,CON) 072364 001274 00700.
072364 001274 00700. MRREST:
\$\$ALVC: (RW.D)LCL,REL,CON) 073660 000000 00000.

\$\$RTS :(RW.I.GBL.REL.OVR) 071144 000002 00002.

MRREST.OBJ:1

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GLOBAL SYMBOLS:

 073064-R.
 REIMP. 073176-R.
 STI
 072462-R.

 073322-R.
 REISW. 073230-R.
 STIBK. 072614-R.

 000004
 REITBL 072442-R.
 STICR. 072602-R.
 073546-R: RE1 ST1LPG 073032-R-LOCIP- 073556-R- REIDW-LOCIS- 073562-R- REILN-LOCIW- 073566-R- REIMA-STILS. STILW 073024-R · 073016-R · ST1PR ST1QR 072722-R 072744-R 073150-R: RS1 073516-R: ST1LN: 000011 ST1TBL 072364-R

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK;7 MRBUG .

*** SEGMENT: MRBUG

R/W-MEM- LIMITS: 072364 073353 000770 00504. DISK-BLK-LIMITS: 000104 000104 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE. IDENT, FILE.

BLK::(RW.I.LCL.REL.CON) 072364 000000 000000 MRBUG::(RW.I.LCL.REL.CON) 072364 000766 00502. 072364 000766 00502. MRBUG::(RW.D.LCL.REL.CON) 073352 000000 000000 \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 000002.

MRBUG.OBJ;1

GLOBAL SYMBOLS:

072364-R: G01 072672-R: OF1 072472-R - SSI 072516-R

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/11 (A-RDP85-00514R000200020001-3-4-

*** SEGMENT: CF ...

R/W MEM LIMITS: 072014 073517 001504 00836. DISK-BLK-LIMITS: 000105 000106:000002 00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION.

TITLE .. IDENT: FILE ..

CP.OBJ:1

BLK::(RW,I,LCL,REL,CON) 072014 000000 00000 CP::(RW,I,LCL,REL,CON) 072014 001312 00714. 072014 001312 00714. 072014 001312 00714. CP: \$\$ALVC:(RW,D,LCL,REL,CON) 073326 000170 00120. \$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002 00002.

GLOBAL SYMBOLS:

AT2 073326-R · CPXX 073224-R: 073406-R: LR2 072112-R FR2 073426-R GO2 073446-R BCL. INDEX. 072110-R OF2 073346-R REREG 073324-R 073436-R 882 073376-R CL2. CP: 073416-R 073476-R ST2. 073456-R 073144-R: HLB PC2 073356-R: RG2:

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK:7 CPBUG1

*** SEGMENT: CFBUG1.

GLOBAL SYMBOLS:

R/W MEM LIMITS: 073520 074373 000654 00428. DISK-BLK-LIMITS: 000107 000107 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. . TITLE . . IDENT. FILE . .

BLK::(RW,I,LCL,REL,CON) 073520 000000 000000.
CPBUG1:(RW,I,LCL,REL,CON) 073520 000654 00428.
073520 000654 00428.
\$\$ALVC:(RW,D,LCL,REL,CON) 074374 000000 000000.
\$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002 000002.

CPBUG1 CPBUG1.0BJ;1

AT2 073524-R · LR2 073656-R: OF2: 073632+R - PC2 -074010-R: RG2: 074072-R

- The second of
AIDQR.TSK CPBUG2

MEMORY ALLOCATION MAR TKB 27-MAR-80 MARRING Ved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3

*** SEGMENT: CPBUG2

R/W-MEM- LIMITS: 073520 076167 002450 01320. DISK-BLK-LIMITS: 000110 000112 000003 00003.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION, .

TITLE IDENT FILE

BLK::(RW,I,LCL,REL,CON) 073520 000000 00000.

CPBUG2:(RW,I,LCL,REL,CON) 073520 002450 01320.

073520 002450 01320.

CPBUG2:

\$\$ALVC:(RW,D,LCL,REL,CON) 076170 000000 00000.

\$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002 00002. CPBUG2.0BJ;1

GLOBAL SYMBOLS:

FR2 074510-R: GO2 073656-R AIDOR.TSK:7 CPREST MEMORY ALLOCATION MAP. TKB 27-MAR-80 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

*** SEGMENT: CPREST

R/W-MEM- LIMITS: 073520 075327 001610 00904. DISK-BLK-LIMITS: 000113 000114 000002 00002.

MEMORY-ALLOCATION SYNOPSIS:

SECTION, .

TITLE. IDENT: FILE.

BLK::(RW.I.LCL.REL.CON) 073520 000000 00000. CPREST: (RW.I.LCL, REL, CON) 073520

001606 00902.

\$\$ALVC:(RW,D,LCL,REL,CON) 075320 001606 00902. CPREST \$\$ALVC:(RW,I,GBL,REL,CON) 075326 000000 00000. \$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002.00002.

CPREST.OBJ:1

GLOBAL SYMBOLS:

													14. 4. 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
CL2·	075316-R·	RE2RC-	075102-R	RE2R4	075142-R	ST2·	074000-R	ST2PB	074302-R	ST2RE	974524-P	STORZ	024564-R
RE2	074664-R·	RE2RD	075076-R	RE2R5	075136-R	5128K	И74134-Р.	STOPE	タフオママオニロ	oropa	074690 D	07000	- A# 48 A B
RE2DD	017024-6	KEZKE	0/30/Z-K-	REZRO	U/5132*R	- 512CR+	и74120-R ·	ST2Ph	924366-P.	STOP1	のフォビエオニロ	CTODO	OF ACE 4 B
RE2LH	000023	RE2RF	075066-R-	RE2R7	075126-R	ST2DA	974429-P.	STOPA	074550_D	OTARA	074014FK	01289	074554-R 073520-R
RE2MA	074750-R	RE2R0	075162-R	RE2R8	075122-R	ST2DD	074462+P.	GTODD	074544-R	012KZ	074610-K	2171BF	073520HR
RE2MP	075000-R	RE2R1	075156-R	RE2R9	075116-P.	STOLA	0000021	OTZNO OTZDO	074540-R	012K3	074604-R		
RE2RA	075112+R	RESES.	075152-P.	PESTEL	077664_D	CTOMO	0000031	OTODA	074534-R	512R4	074600-R		-
RE2RB	075106-P.	PEOPZ	075132 R	D00	0130041K	STAIN CTODA	074160-R	SIZKU	074534-R 074530-R	512R5	074574-R		\$4. . J. Da
174-6-174	010100 K	KEZKO	01.2140-14.	1/25.	013200-K.	SIZPH	014250-R.	STZRE	1874538-R	STZR6	074570-R		1.3- 44

CPLD

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: CPLD . . .

R/W-MEM- LIMITS: 073520 075407 001670 00952. DISK-BLK-LIMITS: 000115 000116 000002 00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. -

TITLE . IDENT: FILE . .

BLK::(RW.I.LTL.REL.CON) 073520 000000 00000.
CPLD::(RW.I.LTL.REL.CON) 073520 001670 00952.
073520 001670 00952. CPLD:
\$\$ALVC:(RW.D.LCL.REL.CON) 075410 00000 00000.
\$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

CPLD.OBJ:1

GLOBAL SYMBOLS:

LD2. 073540-R: LD2BL: 074634-R: LD2GD: 074212-R: LD2GS: 074012-R: LD2HL 074454-R: LD2LN: 000004 LD2TBL:073520-R

AIDQR.TSK;7 CPPR -

MORY ALLOCATION MAP TKB Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

*** SEGMENT: CPPR

R/W-MEM- LIMITS: 073520 075303 001564 00884. DISK-BLK-LIMITS: 000117 000120 000002 00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE, IDENT, FILE.

BLK::(RW.I,LCL,REL,CON) 073520 000000 00000. CPPR: :(RW,I,LCL,REL,CON) 073520 001564 00884.

#\$ALVC:(RW.D.LCL.REL.CON) 075304 00000 00000. \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

CPPR.OBJ;1

GLOBAL SYMBOLS:

PB2: 074764-R: PB2HB: 075034-R: PB2LN: 000003 PR2: PB2BL: 075220-R: PB2HL 075126-R: PB2TBL 073530-R: PR2CD 074032-R^{∰PR}2TBL[™]073520-R 000002 073544-R: PR20S 074352-R PR2LN

AIDOR.TSK

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/11 CIA-RDP85-00514R000200020001-3

*** SEGMENT: BCE . . .

R/W MEM LIMITS: 072014 072647 000634 00412. DISK BLK LIMITS: 000121 000121 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE . IDENT: FILE . .

. BLK::(RW.I.LCL.REL.CON) 072014 000000 00000. BCE::(RW.I.LCL.REL.CON) 072014 000164 00116. 072014 000164 00116.

000164 00116. BCE BCREST:(RW.I.LCL.REL.CON) 072200 000446 00294.

BCE.OBJ:1 BCREST.OBJ:1

\$\$ALVC:(RW,D,LCL,REL,CON) 072646 00000 00000. \$\$RTS::(RW,I,GBL,REL,OVR) 071144 00002 00002.

GLOBAL SYMBOLS:

BCE- 072030-R RE3C1 3CEXX 072110-R RE3C2 072510-R: RE3LN: 000003 072516-R: RE3TBL 072214-R: 072524-R: RS3 072616-R: ST3 072230-R ST3LB ST3LN 072370-R ST3C1 ST3C2 072350-R природз KE3 072424-R: RE3LB 072360-R ST3TBL 072200-R

MEMORY ALLOCATION MAP TKB PAGE 107/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK;7

*** SEGMENT: PPS . . .

R/W-MEM- LIMITS: 072014 072567 000554 00364. DISK-BLK-LIMITS: 000122 000122 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE . IDENT: FILE . .

PPS.OBJ:1

BLK::(RW,I,LCL,REL,CON) 072014 000000 00000.
PPS::(RW,I,LCL,REL,CON) 072014 000464 00308.
072014 000464 00308.
PPS
\$\$ALVC:(RW,D,LCL,REL,CON) 072500 000070 00056.

\$\$RTS: (RW,I,GBL,REL,OVR) 071144 000002 00002.

GLOBAL SYMBOLS:

072520-R · ER4 072530-R PPPR4 072510-R PPSXX 072132+R QREG 072222+R STQP ST4 072360-R CODE: 072050-R· LD4 072500-R PPS 072052-R: PS4 072540-R: RE4 072550-R 072560-R

middle of the A. 3

AIDOR.TSK PPLD.

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: PPLD . . .

R/W MEM LIMITS: 072570 075233 002444 01316. DISK BLK LIMITS: 000123 000125 000003 00003.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION.

TITLE . IDENT: FILE . .

.BLK::(RW.I.LCL.REL.CON) 072570 000000 00000.PPLD::(RW.I.LCL.REL.CON) 072570 002444 01316.

\$\$ALVC:(RW.D.LCL.REL.CON) 075234 00000 00000. \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 00002.

PPLD.OBJ;1

GLOBAL SYMBOLS:

THE PROPERTY OF THE PARTY OF TH AIDQR.TSK;7 MEMORY ALLOCATION MAP 17 TO THE PROPERTY OF TH PPPR.

*** SEGMENT: PPPR

R/W-MEM- LIMITS: 072570 075167 002400 01280. DISK-BLK-LIMITS: 000126 000130 000003 00003.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE . IDENT: FILE . .

.BLK::(RW,I,LCL,REL,GON) 072570 000000 00000. PPPR::(RW,I,LCL,REL,GON) 072570 002400 01280.

##ALVC:(RW.D.LCL.REL.CON) 075170 000000 00000.

\$\$RTS:(RW.I.GBL.REL.OVR) 071144 000002 00002

PPPR.OBJ;1

GLOBAL SYMBOLS:

PPR4 072644-R: PR4F0: 074166-R: PR4LN: 000044 PR4QR: 074344-R: PR4Q0 074534-R: PR4Q2 074550-R PR4FC: 074156-R: PR4FP: 074146-R: PR4QL: 073142-R: PR4QW: 073132-R: PR4Q1 074542-R: PR4TBL: 072570-R

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AIDQR.TSK PPREST-

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: PPREST

R/W-MEM- LIMITS: 072570 074167 001400 00768. DISK-BLK-LIMITS: 000131 000132 000002 00002.

MEMORY-ALLOCATION SYNOPSIS:

SECTION, ...

TITLE · IDENT | FILE · ·

BLK::(RW.I,LCL,REL,CON) 072570 000000 00000.

PPREST:(RW,I,LCL,REL,CON) 072570 001376 00766.

072570 001376 00766.

\$\$ALVC:(RW,D,LCL,REL,CON) 074166 000000 00000.

\$\$RTS::(RW,I,GBL,REL,OVR) 071144 000002 000002.

PPREST.OBJ:1

GLOBAL SYMBOLS:

074156-R. ER4LN. 000005 ER4Q1 073676-R. PS4 073304-R. ER4QR. 073534-R. ER4Q2. 073704-R. RE4 074072-R: RE4SW: 073150-R: ST4CR 073064-R: RE4TBL:072610-R: ST4LN 000001 ST4 072640-R: ST4MR ST40P · 072772-R 000004 ST4QR: 073026-R: ER4FC 073370-R ER4Q0 073672-R ER4TBL 072614-R RE4LN 073004-R

AIDOR:TSK:7 MEMORY ALLOCATION MAP TKB SP 27-MAR-80 **Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3**

*** SEGMENT: SF ...

R/W-MEM- LIMITS: 072014 072573 000560 00368. DISK-BLK-LIMITS: 000133 000133 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION...

BLK::(RW,I).LCL.REL.CON) 072014 000000 00000.

SP::(RW,I).LCL.REL.CON) 072014 000172 00122.
072014 000172 00122.
SPSUB::(RW,I).LCL.REL.CON) 072206 000324 00212.

\$\$ALVC::(RW,D).LCL.REL.CON) 072532 0000048 00032.
\$\$RTS::(RW,I).GBL.REL.OVR) 071144 000002 000002.

GLOBAL SYMBOLS:

CL5: 072552-R: LBSP: 072206-R: LD5 072532-R: SPCR: 072450-R: SPPR5 072542-R: SPSXX 072116-R CODE: 072034-R: LBSSC: 072304-R: PS5 072562-R: SPLB: 072402-R: SPS: 072036-R: AIDOR: TSK SPLD.

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: SPLD ...

R/W-MEM- LIMITS: 072574 073647 001054 00556. DISK-BLK-LIMITS: 000134 000135 000002 00002.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. ..

TITLE . . IDENT, FILE . .

SPLD.OBJ:1

GLOBAL SYMBOLS:

072624-R: LD50B: 073106-R: LD50X: 073076-R: LD55I: 073312-R: LD5TBL:072574-R: 000006: LD50R: 073116-R: LD5SR: 073126-R: LD5S2: 073322-R: ∟D5÷

nemory Allocation Mapproved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDOR.TSK;7 SPPR -

*** SEGMENT: SPPR:

R/W-MEM- LIMITS: 072574 073547 000754 00492. DISK-BLK-LIMITS: 000136 000136 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. ..

TITLE . IDENT: FILE, .

. BLK::(RW.I.LCL.REL.CON) 072574 000000 00000. SPPR::(RW.I.LCL.REL.CON) 072574 000752 00490. 072574 000752 00490. SPPR

\$\$ALVC:(RW.D.LCL.REL.CON) 073546 000000 00000. \$\$RTS::(RW.I.GBL.REL.OVR) 071144 000002 000002.

SPPR.OBJ;1

GLOBAL SYMBOLS:

PR5LN- 000030 PR5QR- 073132-R- PR5SR- 073142-R- PR5S2- 073274-R- SPPR5 072624-R- PR5QB- 073122-R- PR5QX- 073112-R- PR5S1 073264-R- PR5TBL-072574-R-

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AIDOR.TSK SPREST.

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

*** SEGMENT: SPREST

R/W-MEM- LIMITS: 072574 072613 000020 00016. DISK-BLK-LIMITS: 000137 000137 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. ..

TITLE . IDENT, FILE . .

SPREST.OBJ:1

BLK::(RW.I;LCL;REL,CON) 072574 000000 00000.

SPREST:(RW,I;LCL;REL,CON) 072574 000020 00016.

072574 000020 00016.

\$\$ALVC:(RW,D;LCL;REL,CON) 072614 000000 00000.

\$\$RTS::(RW,I;GBL;REL,OVR) 071144 000002 000002.

GLOBAL · SYMBOLS:

CL5. 072604-R: PS5

072574-R:

*** TASK BUILDER STATISTICS:

TOTAL-WORK-FILE-REFERENCES: 70839.
WORK- FILE- READS: 0.
WORK- FILE-WRITES: 0.
SIZE-OF-CORE-POOL: 15082. WORDS-(58. PAGES)
SIZE-OF-WORK-FILE: 13568. WORDS-(53. PAGES)

ELAPSED TIME:00:00:54

390 001166 00 391 001170 01 392-001174 393		001300		GLR · MOV · CALL ·	–(SP) # <q\$pp2+q\$lbd>,−(SP) CSR1</q\$pp2+q\$lbd>	:CLEAR NOTHING: :SELECT PPS AND SET DRIVE
394 395			;	SET·LHF	START, THEN CLEAR	
995 896 001200 01 897 001206 00	12767 05067	010000 17642 176422	22.	MOV. CLR.	#Q\$LHP.QR\$CR2. QR\$CR2.	等等。 #START+LHP #CLEAR+
358 399 400 401 402 · 403				WAIT-2- ADD-=-3 DEC-=-2 BNE-=-1	2.65US	- II
-004 001212 01 405 001216 00 406 001220 00 407 001222 00 408 001224 00	05000 60000 05301	000454	1\$:	MOV: CLR: ADD: DEC: BNE:	#300R1 R0 R0.R0 R1 1\$:EXECUTE 300 TIMES:
110 111				CLEAR·L	OD-BUS-DRIVE, DESELECT-	PPS:
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	12746 12746	001300 176000		MOV: MOV: CALL:	#{Q\$PP2+Q\$LBD>,-(SP) #Q\$NCLK,-(SP) CSR1	#CLEAR DRIVE AND DESELECT # 3%
416 417				GLEAR - F	PP·CR·	
:14 18 001242 01 19 001246 20 001252 00			Ā	MOV. CALL.	#Q\$CLR(SP) PPCR	;CODE-FOR-CLEAR-
421 421 422 423 001256	00101	000000	: : ER4X:	JMP.	ER4X .	
424 001256 - 03 425 001264 - 00 426 001266 - 00	01402	000000G · 00000		BIT. BEQ. JMP.	#LOOP.BASE 1\$ ER4IN	:LOOP-ON-ERASE :NO: :REPEAT-ERASE
427 428-001272 429-001276 - 00			; i\$:	GALL. JMP.	KILL PPSXX:	**************************************

PPREST MACRO M1110 27-MAR-80 15:25 PAGE B Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3 431 432 433 PAGE · SWITCH · 434 435 436 001302 437 001302 PS4:: 437 001302 438 001306 CALL FIND :FIND A NON-BLANK IN COMMAND LINE :OK, CONTINUE :NOTHING THERE :RETURN TO TOP OF LOOP (PROMPT) 103004 BCC. 1\$ 439 001310 440 001314 ERR4 CALL 000167 000042 JMP -PS4X 441 442 001320 GALL. 1\$: PACK CONVERT. VALUE IN COMMAND LINE TO BINARY 443 001324 444 001326 103004 BCC. CALL 2\$ ERRS 445 001332 000167 000024 JMP. PS4X 446 001336 447 2\$: GALL MCV-LOOPR 448 001342 449 001346 :TEST-FOR-LOOP-OPTION-016746 000000G 3\$: BINWD,-(SP) :SELECT A GLB PAGE CALL SELPG-450 001352 451 001360 032767 000000G - 000000G #LOOP, BASE :REPEAT.? 001370 生药物 BNE -3\$ 452 :YES 453 454 001362 PS4X: 455 001362 000167 000000G JMP. PPSXX-456 457 458 459 CALL HOR LOADER 460 461 462 001366 463 001366 991372 ĆL4:: CALL OL» ;CALL ROUTINE IN AMAINS 000167 000000G PPSXX. 465 466 000001 .END

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PPREST M 20 M1110 27-MAR-80 15:25 PAGE 8-1
SYMBOL TA CIA-RDP85-00514R000200020001-3
ALUCKE = . 040000
                                BYTE40=.000050
                                                               BYTE92=-000134
                                                                                              MAR.LO= 002000
                                                                                                                             Q$LBDP=-001001
ALUOE - 004000
A01 - 010000
BASE - *********** GX
                                BYTE41= 000051
                                                               BYTE93= 000135
                                                                                              MAR.OU= 000040
MBKALL= 001000
                                                                                                                             Q$LBP - - 000001
                               BYTE42= 000052
                                                               BYTE94= 000136
                                                                                                                             Q$LDCD= 000003
                                BYTE43 = . 000053
                                                               BYTE95 = - 000137
                                                                                              MBKCLK= 000400
BINUD = ****** GX
                                                                                                                             Q$LDMD=.000004
                                BYTE44= 000054
                                                               BYTE96= 000140
                                                                                              MMADRD= 000100
                                                                                                                             Q$LDPP= : 002000
BITVAL = . 000000
                               BYTE45= 000055
                                                               BYTE97= 000141
                                                                                              MMLEFT= 000002
MMOE - 000004
MMURTE= 000010
                                                                                                                             Q$LHP - - 010000
      = 0000001
= 000002
                               BYTE46= · 000056
                                                               BYTE98= 000142
                                                                                                                             Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
BIT1
                                BYTE47= 0000057
                                                               BYTE99= 000143
BIT10 = 002000
                                BYTE48= 000060
                                                               BYTVAL = . 000144
                                                                                              MNOBRE = 100000
        = 004000
BITii
                               BYTE49 = 000061
                                                               CBKALL = 001000
                                                                                              MREN1 = 000001
MREN2 = 020000
                                                                                                                             Q$MRP2=-000240
Q$MSC-=-040000
Q$MSET=-000004
Q$MSET=-100000
        = 010000
                                BYTE5 = 000001
                                                               CBKCLK = . 000400
BIT13 = 020000
BIT14 = 040000
                                BYTE50- 000062
                                                                                              MSYN = 000040
N· = 000144
                                                               CL
                                                                     = · ****** GX · 001366RG ·
                               BYTE51= 000063
                                                                                         992 N.
          100000
                                BYTE52= 000064
                                                               CNOBRE= 100000
CONSOL= ****** GX
                                                                                              ONCE - ***** GX
                                                                                                                        Q$PSF - 100000
Q$PNCLK = 176000
Q$PP = 000100
002 Q$PPSW = 000320
Q$PP2 = 000300
BIT2.
        = 000004
                                BYTE53= 000065
                                                                                              PACK - ******* GX**
PGSEL3 001120R PLB - 000010
BIT3
        = 0000010
                               BYTE54= 0000066
                                                               CPCCEN= 010000
                               BYTE55= 000067
BIT4
          000020
                                                               CPREAD = 040000
BIT5
                               BYTE56= 000070
                                                                                                      = 0000020
                                                               CPWRTE= 020000
                                                                                              PLC.
                                                                                                                             Q$QHLT= 000013
BIT6
        = -000100
                                BYTE57= 000071
                                                               CSADRD = - 000004
                                                                                                                                                    ----
                                                                                              PLD· = 000030
PLRWR· = 000200
                                                                                                                             Q$QL = 000043
Q$QLA = 000053
                                                               CSEQCI = 100000
BIT7
        - 000200
                                BYTE58- 000072
                                                                                                                                                    000400
                                                               CSOE - - 000040
CSR1 - * ******* GX-
CSWRTE - 000100
                               BYTE59 = . 00007.7
                                                                                              PLR:EN= 000200
                                                                                                                             Q$QLB -- 000054
BIT9
                               BYTE6 = 000006
        = 001000
                                                                                              PPCR· = · *****
                                                                                                                             Q$QLR -- 000001
Q$QW -- 000042
                               BYTE60= 000074
BYTER
       = - 0000000
                                                                                              PPSXX: =: ******
BYTE1 = 000001
                               BYTE61= 000075
BYTE62= 000076
                                                               DBR:RD= 000001
                                                                                              PRINT: =: ****** GX
                                                                                                                             Q$RDCD= 000005
BYTE10= 000012
                                                               DB$CPP= 001457
                                                                                              PS4
                                                                                                        001302RG
                                                                                                                        002 · Q$RDMD = · 000006
                                                                                                                                                            BYTE11= 000013
                               BYTE63= 000077
                                                              DB$SPT=-000026
DB$TPC=-000023
DISPGS=-100000
                                                                                              PS4X-
                                                                                                        001362R
                                                                                                                            ·Q$REBK= ∙001000
Q$RNC ·= ∙006000
Q$RSC ·= ∙004000
BYTE12= 000014
                                BYTE64= 000100
                                                                                              QREG: =: ****** GX
BYTE13= 000015
                               BYTE65= 000101
                                                                                                                                                  A POST BY
                                                                                              QR$CR1= 176420
BYTE14= 000016
                               BYTE66= 000102
                                                               DMAAUR = - 000005
                                                                                              QR$CR2= · 176422 ·
                                                                                                                             Q$RSET= 000010
BYTE15= 000017
                               BYTE67= 000103
                                                               DMARRD=-000003
                                                                                              QR$LBR= · 176424
                                                                                                                             Q$SM = 100000 *
Q$SP = 000120
BYTE16= 000020
                               BYTE68= 000104
                                                              Q$ATTN= 000100
BYTE17=-000021
                               BYTE69= 000105
                                                                                              Q$BCL - - 000001
                                                                                                                             Q$SP2 - 000340
BYTE18= 000022
                               BYTE7 = 0000007
BYTE19=-000023
BYTE2-=-000002
                                                                                              Q$CCCP=-000040
                                                                                                                             RF4
                                                                                                                                       000274RG
000350R
                                                                                                                                                       002°
                               BYTE70= 000106
BYTE71= 000107
                                                                      = - жижижиж GX-
                                                               ERR5
                                                                                              Q$CHB - = 000400
                                                                                                                                                       002
                                                               ERR6
                                                                      = - жикиники БХ
                                                                                              Q$CHRL= 000200
                                                                                                                             RE4LN = 000001 G
RE4PUT 000430R
RE4SW 000360RG
BYTE20= 000024
                               BYTE72= 000110
                                                               ER4
                                                                         000514RG
                                                                                         002 · Q$CLR · = · 000040
BYTE21= 000025
BYTE22= 000026
                               BYTE73= 000111
                                                               ER4FC -
                                                                         000600RG
                                                                                         002 · Q$CHC · = · 030000
                                                                                                                                                       คค่ว
                               BYTE74= 000112
                                                               ER4IN.
                                                                         000570R
                                                                                        002.Q$CP. = 000060
                                                                                                                             RE4TBL #00020RG
BYTE23= 000027
                               BYTE75= 000113
                                                                                                                                                       002
                                                               FR41 N . =
                                                                         000005 G
                                                                                              Q$CPCC=-000010
                                                                                                                             RE4X
BYTE24= 000030
BYTE25= 000031
                               BYTE76= 000114
                                                                                                                                                       002
                                                                                        002 · Q$CP2 · = · 000260
002 · Q$CSC · = · 010000
                                                               ER40R
                                                                         000744RG
                                                                                                                             RGQ.EN= 000200
                               BYTE77= 000115
                                                                                                                            RGU: EN= : 000200
RGG: VA = 020000
RGHPT = : ************** GX
SCGN = : ************* GX
SELPG = ************* GX
                                                               ER400
                                                                         001102RG
BYTE26= 000032
                               BYTE78=-000116
                                                               ER401
                                                                         001106RG
                                                                                         002 · Q$CSEL = · 000360
BYTE27= 000033
                               BYTE79= 000117
                                                              ER402
                                                                         001114RG
                                                                                             ·Q$CSET=-000002
BYTE28 = 000034
                               BYTE8 = 000010
                                                              ER4TBL
                                                                                        002.0$CSP = 020000
002.Q$DMA. = 000001
                                                                         000024RG
BYTE29= 000035
                               BYTE80= 000120
                                                               ER4X-
                                                                         001256R
                                                                                                                             SEQ.CI= 000010
BYTE3 = 000003
                               BYTE81= 000121
                                                              FIND:
                                                                       =·******* GX
                                                                                              Q$ENBK = . 040000
                                                                                                                             STOP
BYTE30= 000036
                               BYTE82=:000122
                                                              KILL:
                                                                      = - жижжижж БХ
                                                                                              Q$ENOP= 020000
                                                                                                                                       000050RG
                                                                                                                             ST4
BYTE31 = . 000037
                               BYTE83= 000123
                                                              LBPSC·=·****** GX
                                                                                              Q$FAL - = . 004000
                                                                                                                             ST4CR
BYTE32= 000040
                                                                                                                                       000170RG
                                                                                                                                                       002
                               BYTE84= 000124
BYTE85= 000125
                                                               LOC.EN= 000100
                                                                                             Q$FC - 000045
Q$FO - 000044
                                                                                                                             ST4IN
                                                                                                                                       000160R
BYTE33= 000041
                                                                                                                                                       002
                                                              200. W= - 040000
LOC. W= - 100000
LOCP - + ******* GX-
LOCP - ******** GX-
                                                                                                                             ST4LN = 0000004 G
                                                                                                                             ว..4LP 000250R -
รัฐสัตร์วิ...ตอดว
BYTE34= 000042
BYTE35= 000043
                               BYTE86= 000126
                                                                                              Q$FP
                                                                                                    - 000046
                                                                                                                             S.T.4LE
                                                                                                                                                       992
                               BYTE87 = . 000127
                                                                                              Q$HBF · = · 000002
BYTE36= 000044
                                                                                                                                                       992
                               BYTE88= 000130
                                                                                              Q$ICP = 000006
                                                                                                                                     1 000202RG
                                                                                                                             $T40P
                                                                                                                                                       002
BYTE37= 000045
                               BYTE89= 000131
                                                              MARENI = . 000001
                                                                                              Q$IHB - - 000003
                                                                                                                                       000236RG
                                                                                                                             ST40R
                               BYTE9 = 000011
BYTE38= : 000046
                                                              MAREN2 = . 004000
                                                                                              Q$IHRL= 000002
Q$IMRP= 000007
                                                                                                                             ST4TBL -
                                                                                                                                       000000RG
BYTE39= 000047
                                                                                                                                                       992
                                                              MARLOD- 010000
                               BYTE90= 000132
                                                                                                                             ST4X
BYTE4 = 000004
                                           002
                               BYTE91 = . 000133
```

```
PPREST: MACRO M1110 27-MAR-80 15:25 PAGE 8-2 SYMBOL TABLE Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
                                                                                  WORD13=-000032-
WORD14=-000034
WORD15=-000036
                                         T$FSAC= RARA14
                                                                                                                           WORD43=-000126
                                                                                                                                                                   WORD73= 000222
WORD74= 000224
S$QB
                                         T$FSB2=-000010
                                                                                                                           WORD44= 000130
S$QR
             000006
                                                                                                                           WORD45=-000132
WORD46=-000134
                                                                                                                                                                    WORD75= 000226
5$QX
             0000004
                                         T$IBAR=:000024
                                                                                  WORD16= 000040
                                                                                                                                                                    WORD75= 000226
WORD76= 000230
WORD77= 000232
WORD78= 000234
WORD79= 000236
WORD8 = 000246
3≇SR
              000007
                                                                                  WORD17 = 000042
WORD18 = 000044
                                         T$IBE - - 020000
T$IBF - - 040000
                                                                                                                           WORD47 = . 000136
5$S1
             000010
                                                                                                                           WORD48 = . 000140
9892
          = 0000014
                                          T$ICD·=∙000040
                                                                                  WORD19= 000046
                                                                                                                           WORD49= 000142
WORD5 = 000012
 TD$CTR=-176370
                                         T$MODE = 004000
T$OB = 000036
                                                                                  WORD2·=·000004
 TD$CTW= 176360
                                                                                  WORD20=-000050
WORD21=-000052-
WORD22=-000054
                                                                                                                           WORD50= 000144
                                                                                                                                                                    WORD80= 000240
WORD81= 000242
TD$IHL= 004000
TD$MEM= 000270
                                          T$0BE · = · 004000
                                                                                                                           WORD51=-000146
WORD52=-000150
WORD53=-000152-
                                          T$0BF -- 010000
                                                                                                                                                                    WORD82= 000244
 TD$0AR= 176344
                                          T$0BRA= 000034
                                                                                  WORD23=-000056
WORD24=-000060
WORD25=-000062
                                                                                                                                                                    WORD83= 000246
 TD$OTR= 176346
                                          T$0BWA= ∙000032
                                                                                                                           WORD54= 000154
                                                                                                                                                                    WORD84= 000250
TD$QRD=-000274
TD$SW-=-176376
                                          T$OUTA= 100000
                                                                                                                          WORD55= 000156
WORD56= 000160
WORD57= 000162
                                                                                                                                                                    WORD85= 000252
                                                                                  WORD26=-000064
WORD27=-000066
WORD28=-000070
                                         T$RBD0=-000200
T$RNB-=-000040
                                                                                                                                                                    WORD86= 000254
 TD$TAR=-176372
                                                                                                                                                                   WORD87= 000256
WORD88= 000260
 TD$TAW≕ 176362
                                          T$RSET= 040000
                                                                                                                           WORD58=.000164
 TD$TDR=-176374
                                         T$SC - - 000022
T$SCLK - 020000
T$SEG! - 000000
                                                                                  WORD29 = . 000072 .
                                                                                                                                                                   WORD88= 000260

WORD89= 000262

WORD9 = 000022

WORD90= 000264

WORD91= 000266
                                                                                                                          WORD59= 000166
WORD6 = 000014
 TD$TDW≕-176364
                                                                                  WORD3 - 000006
         = 000020
= 000002
= 0000010
                                                                                  WORD33 = 000006
WORD30 = 000074
WORD31 = 000076
WORD32 = 000100
WORD33 = 000102
WORD34 = 000104
 T$AD∙
                                                                                                                           WORD60= 000170
                                         T$SEG2=-000001
T$SEG3=-000002
T$SO---000001
TSBA.
                                                                                                                          WORD61= 000172
WORD62= 000174
WORD63= 000176
T$BD ⋅
                                                                                                                                                                    WORD92= 000270
                                                                                                                                                                    WORD93= 000272
WORD94= 000274
TSRT.
         = -000020
                                          T$UBUS= 100000
                                                                                                                           WORD64= 000200
T$BTAR= 000030
                                          T$1CLK=-000400
                                                                                  WORD35= 000106
                                                                                                                          WORD65=-000202
WORD66=-000204
                                                                                                                                                                    WORD95= 000276
T$BTD - = - 002000
                                         T$8BEN= 000020
UBD.IN= 000020
UNPK - *******
                                                                                  WORD36= 000110
WORD37= 000112
WORD38= 000114
                                                                                                                                                                   WORD96= 000300.
WORD97= 000302
T$CD· = 000100
T$CLK·= 002000
T$DISK= 000200
                                                                                                                           WORD67= 000206
                                                                                                                           WORD68= 000210
                                                                                                                                                                    WORD98= 000304
                                         WORD0 = 000000
WORD1 = 000002
                                                                                  WORD39= 000116
                                                                                                                          WORD69= 000212
WORD7 = 000016
                                                                                                                                                                    WORD99= 000306
T$DRD - = - 000004
                                                                                  WORD4 = 000010
WORD40= 000120
                                                                                                                                                                    WRDVAL = 000310
XTREAD = 001000
 T$EMEM= 010000
                                         WORD10= 000024
                                                                                                                           WORD70=.000214
                                                                                  WORD41=.000120
WORD41=.000122
WORD42=.000124
T$FSAA = ⋅ ฅฅฅฅฅฅ
                                         WORD11= 000026
WORD12= 000030
                                                                                                                          WORD71= 000216
WORD72= 000220
                                                                                                                                                                    XTWRTE = . 000400
T$FSAB = 000004
  ABS.
              000000
                                 000
              000000
                                 001
PPREST-
            881376
                                002
ERRORS DETECTED:
                              0
VIRTUAL-MEMORY-USED: 3336 WORDS- (-14 PAGES)
DYNAMIC-MEMORY: 4916 WORDS- (-18 PAGES)
ELAPSED-TIME: 00:00:49
```

PPREST, PPREST/+SP=[20,1]IM,[20,1]PPREST

12 14

TOUGH BRIDE START OF

.TITLE- SP-

HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS SUBDOCUMENT PROCESSORS

PARSE THE COMMAND LINE AND TRANSFER CONTROL TO ONE OF THE SP SUB-MODULES OR BACK TO GMAIN, CONTROL COULD HAVE BEEN PASSED TO SP IN ONE OF THREE WAYS:

1. FROM GMAIN IF SP WAS SELECTED AS THE FIRST PROCESSOR UPON ENTRY TO THE PROGRAM

>SP·LD·QX 0

2: FROM: QMAIN: IF:SP:WAS: SELECTED FROM: ONE: OF: QMAIN'S OTHER: SUB-MODULES: CP>SP:LD:QX:0
3: ON: RETURN FROM: ONE: OF: SP'S: SUB-MODULES: SP'S:

SP>LD.QX.0

SP PARSES AT THE SECOND LEVEL OF CONTROL (SEE NOTES AT THE SECOND LEVEL OF CONTROL (SEE NOTES ABOVE) SP WITH A SECOND PARSE (LD AND TRANSFER CONTROL TO THE SP SUB- MODULE SPLD: IF SP SHOULD ENCOUNTER A STRING WHICH IS NOT A VALID COMMAND MEMONIC, SP CONSIDERS THE STRING TO SE A PROCESSOR MNEMONIC AND RETURNS CONTROL TO GMAIN. EG: SE H. PROCESSOR THREHOM TO HAD RETOKNOS COM INCL. TO WHETH, EG. SPXCP-LD CS/G
THE STRING 'CP' IS NOT A VALID SP (SECOND LEVEL) COMMAND, SP RETURNS CONTROL TO OMAIN WHICH IN TURN WILL TRANSFER CONTROL TO ITS SUB-MODULE CP;

SP SUB-MODULES: SPLD. LOAD MEMORIES SPREST ALL OTHER SP COMMANDS

.MCALL - WTSE\$S.CLEF\$S.

THE PROPERTY OF THE PROPERTY O

0 M1110 27-MAR-80 15:31 PAGE 6 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 SP... 40 41 43 44 45 46 47 48 49 55 55 55 55 55 56 60 $\begin{tabular}{ll} TABLE \cdot OF \cdot SP \cdot COMMAND \cdot MNEMONICS \cdot AND \cdot THEIR \cdot ASSOCIATED \\ ROUTINE \cdot ADDRESSES \cdot \\ \end{tabular}$; ; **, 14 000000 000000 000002 SPTBL: 114 000000G 104 .ASCII /LD/ LD5 ;LOAD · MEMORY · .WORD 000004 120 122. .ASCII .WORD .ASCII /PR/ ; PRINT FROM MEMORY 000006 000010 000012 000000G SPPR5 120 000000G 123 ZPSZ : PAGE · SWITCH .WORD PS5 000014 103 114 :CALL OR LOADER 000000G 000016 .WORD CL5 000004 SPNUM-<.-SPTBL>/4 CODE FOR MEMORY SELECTION : CODE:: 000026 000000 .WORD

```
SP------MACRO-M1110 27-MAR-80 15:31 PAGE 7
Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
      62
      63
64
65
                                                           SP ROUTINES.
                                                 ;
      66
      67
         000022
                                                 SPS::
      68
         000022
                                                           CALL
                                                                    FIHD
                                                                                                  :LOCATE THE COMMAND IN THE COMMAND LINE.
      69
70
71
72
73
74
         000026
                   103003
                                                           BCC
                                                                     1$
                                                                                                  :OK, CONTINUE
         000030
                                                           CALL
                                                                     ERR3
         000034
                   000422
                                                           BR
                                                                     SPSXX
         000036
                   022700
                             000002
                                                           CMP -
                                                 1$:
                                                                     #2,R0
2$
                                                                                                  :COMMANDS ARE 2 CHARS
                   001403
                                                           BEQ.
          000044
                                                           CALL
                                                                     ERR8
      75
76
77
         000050
                   000414
                                                           BR
                                                                     SPSXX.
                                                                                                  ;TRY-AGAIN
          000052
                   012700
                             пририча
                                                 2$:
                                                           MOV.
                                                                     #SPNUM, RØ
                                                                                                  :R0 = NUMBER OF COMMANDS
:R2--> TABLE OF COMMAND MNEMONICS
      78
          000056
                   012702
                             ававая с
                                                           MOV.
                                                                     #SPTBL,R2
      29
         000062
                                                           CALL
                                                                                                  FIND MATCH IN TABLE
                                                                     SCAN
      80
         000066
                   103003
                                                           BCC.
                                                                     3$
                                                                                                  OK, CONTINUE.
      81
          000070
                                                           CALL
                                                                     ERR12
                                                                                                  :COMMAND NOT IN TABLE
      82
83
         000074
                   000402
                                                           BR
                                                                     SPSXX
                                                                                                  :TRY-AGAIN
      84
                                                           JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
      86
87
         000076
                   000171
                             000000
                                                 3$:
                                                           JMP
                                                                    @(R1)
      88
      99
90
                                                           LOCAL SP LOOP. INCLUDE PROMPT FOR SP COMMAND.
      91
         000102
                                                                                                                                 34 3
                                                 SPSXX::
      93
         000102
                   012767
                             050123
                                       000000C
                                                           MOV
                                                                     #"SP,GCMBLK+G.DPRM+2.
                                                                                                  :MOVE-SP-NAME-TO-GCM BLOCK
      94
         000110
                                                           CALL
                                                                    GCONLY-
                                                                                                  ; PROMPT
      95
         000114
                                                           CALL -
                                                                    FIND
                                                                                                  :LOCATE · THE · COMMAND · IN · THE · COMMAND · LINE
      96
         000120
                   103003
                                                           BCC -
                                                                     1$
                                                                                                  OK, CONTINUE
      97
         000122
                                                           CALL
                                                                    ERR3
      98
         000126
                   000765
                                                          BR
CMP
                                                                     SPSXX
      99
         000130
                   022700
                                                 1$:
                                                                    #2,R0
                                                                                                  ;COMMANDS.ARE.2.CHARS
     100
         000134
                   001403
                                                           BEQ
                                                                    2$
     101
         000136
                                                           CALL
                                                                    ERR8
     102
         000142
                   000757
                                                           BR
                                                                                                  :TRY-AGAIN
     103
         999144
     104
                   012700
                             000004
                                                           MOV-
                                                                     #SPHUM, RØ
                                                                                                  :R0 = · NUMBER · OF · COMMANDS
     105
         000150
                                                                                                  #RU = NUMBER OF COMMAND NIEMBANICS : FIND MATCH IN TABLE : OK CONTINUE : RETURN TO 'MAIN' LOOK FOR PROCESSOR MNEMONIC : RETURN TO 'MAIN' LOOK FOR PROCESSOR MNEMONIC :
                   012702
                             0000000
                                                           MOV:
                                                                     #SPTBL,R2
     106
         000154
                                                           CALL
                                                                    SCAN
     107
         000160
                   103002
                                                           BCC
                                                                    3$
     108
         000162
                   000167
                             000000G
                                                                    COMXX
     109
    110
                                                           JUMP TO THE ROUTINE THAT GOVERNS THE COMMAND
    111
    112-000166
                   000171
                             000000
                                                 3$:
                                                           JMP
                                                                    @(R1)
```

10 M1118 27-MAR-88 15:31 PAGE 8 Approved For Release 2005/07/10 CIA-RDP85-00514R000200020001-3

114 115

000001

.END

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SP----- MACRO M1110 27-MAR-80 15:31
                                            :31 PAGE 8-1
Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SYMBOL . TABLE
ALUCKE = 040000
                                BYTE42=:000052
                                                               BYTE94= 000136
BYTE95= 000137
                                                                                                PLB.
                                                                                                        = .000010
                                                                                                                               Q$QLR·=·000001
Q$QW =·000042
ALUOE - 004000
A01 - 010000
                                BYTE43= 000053
                                                                                                PLC:
                                                                                                        ≈ . 000020
                                BYTE44= 000054
                                                                BYTE96= 000140
                                                                                                PLD.
                                                                                                       - 900030
                                                                                                                                Q$RDCD= 000005
BITVAL = . 000000
                                BYTE45 = 000055
                                                                BYTE97=-000141
                                                                                                PLRWR·=·000200
                                                                                                                                Q$RDMD= 000006
       --0000001
--0000002
BITO
                                BYTE46= 000056
                                                                                                                               U$RDTD= 000006

Q$REBK= 001000

Q$RNC = 006000

Q$RSC = 004000

Q$RSET= 000010

Q$SM = 100000

Q$SP = 000120

Q$SP = 000340
                                                                BYTE98= 000142
                                                                                                PLR.EN= 000200
BITI
                                BYTE47 = . 000057
                                                                BYTE99= 000143
                                                                                                PS5
                                                                                                       = - жжжжжж
BITIO
                                                               BYTYAL = 000144
CBKALL = 000100
CBKCLK = 000400
CL5 = ********* GX
        = .002000
                                ВҮТЕ48 = ОООООО
                                                                                                QR$CR1=:176420
       = 004000
                                BYTE49= 000061
                                                                                                OR$CR2= 176422
BIT12 -- 010000
                                BYTE5 = 000005
                                                                                               QR$LBR= 176424
Q$ATTN= 000100
BIT13 = 020000
                                BYTE50=-000062
        = 040000
                                                                CHOBRE = 100000
BIT14
                                BYTE51= 000063
                                                                                          Q$BCL. = . 000001
002 · Q$CCCP = . 000040
       = 100000
BIT15
                                BYTE52= 000064
                                                                CODE: 000020RG
                                                                                                                                RGQ.EN= 000200
        - 0000004
                                                                COMXX = ****** GX
BIT2
                                BYTE53 = 000065
                                                                                                Q$CHB - = - 000400
                                                                                                                                RGQ.VA= 020000
BIT3
          000010
                                BYTE54= 000066
                                                                CPCCEN=-010000
                                                                                                Q$CHRL= 000200
                                                                                                                               SCAN = *******
SEQ.CI= *000010
BIT4
        = 0000026
                                BYTE55= 000067
                                                                CPREAD = 040000
CPWRTE = 020000
                                                                                                Q$CLR - = - 000040
BIT5
        - 000040
                                BYTE56 = . 000070
                                                                                                Q$CNC -- 030000
                                                                                                                                SPHUM-=-000004
        = 000100
GITE
                                BYTE57 = . 000071
                                                                CSADRD = . 000004
                                                                                                Q$CP - 000060
                                                                                                                                SPPR5 = · *****
BIT7
          000200
                                BYTE58= 000072
                                                                CSEQCI = 100000
CSOE - = 000040
CSWRTE = 000100
                                                                                                Q$CPCC= 000010
                                                                                                                                          000022RG
                                                                                                                                SPS.
        = . 000400
                                BYTE59= 000073
                                                                                               Q$CP2·=·000260
Q$CSC·=·010000
Q$CSEL=·000360
                                                                                                                                SPSXX-
                                                                                                                                         PARTO
BIT9
        - 001000
                                BYTE6 - 000006
                                                                                                                                          000000R
                                                                                                                                                       002
1341 A 31
                                                                                                                                SPTBL ·
BYTEO
        = . 000000
                                BYTE60=:000074
                                                                DBR.RD= 000001
                                                                                                                                       = 0000001°
                                                                                                                                Ş$CLR∙
        = 000001
BYTEi
                                BYTE61= 000075
                                                                DB$CPP=-001457
                                                                                                Q$CSET= -000002
                                                                                                                                Š$LA.
BYTE10= 0000012
                                BYTE62= 000076
                                                               DB$SPT= 000026
DB$TPC= 000023
DISPGS= 100000
                                                                                                Q$CSP·=·020000
                                                                                                                                       = 0000005
                                                                                                                               S$0B
BYTE11=-000013
BYTE12=-000014
                                BYTE63= 000077
                                                                                                                                      = 000006
= 000004
                                                                                                Q$DMA:=:000001
                                                                                                                                SSOR
                                BYTE64= 000100
                                                                                                Q$ENBK=.040000
                                                                                                                                S$QX
BYTE13= 000015
                                BYTE65=:000101
                                                                DMAAWR = - 000005
                                                                                                Q$ENOP= 020000
                                                                                                                               $$$R = 7000007
$$$1 = 7000010
$$$2 = 000014
TD$CTR= 176370
BYTE14= 000016
                                BYTE66= 000102
BYTE67= 000103
                                                                DMARRD=-000003
                                                                                               Q$FAL -- 004000
Q$FC -- 000045
BYTE15= 000017
                                                                DMARWR = . 000004
BYTE16= 000020
BYTE17= 000021
                                BYTE68= 000104
                                                               ENBR: =:010000
ERR12:=:******* GX:
                                                                                                Q$FO = 000044
                                BYTE69= 000105
                                                                                                Q$FP - - 000046
                                                                                                                                TD$CTW= 176360
BYTE18= 000022
                                BYTE7 = 000007
BYTE70= 000106
                                                                ERR3 = ****** GX
                                                                                                Q$HBF - = - 0000002
                                                                                                                                TD$INL= 004000
BYTE19= 000023
                                                                      =·*****
                                                                ERR8
                                                                                   GX
                                                                                                Q$ICP -- 000006
                                                                                                                                TD$MEM= . 000270
BYTE2 - - 000002
                                BYTE71= 000107
                                                                      = · ********** GX
                                                                FIND.
                                                                                                Q$IHB - = -000003
                                                                                                                                TD$OAR= 176344
BYTE20= 000024
                                BYTE72= 000110
                                                                GCMBLK = ****** GX
                                                                                               Q$IHRL= 000002
Q$IMRP= 000007
                                                                                                                                TD$OTR=-176346
BYTE21= 000025
                                BYTE73 = . 000111
                                                                GCONLY= ****** GX
                                                                                                                                TD$QRD= 000274
BYTE22= 000026
                                BYTE74= 000112
                                                                G.DPRM= ******** GX
                                                                                                Q$LBD - - 001000
                                                                                                                                TD$SW·≕·176376
BYTE23= 0000027
                                BYTE75= 000113
                                                                       = · ********** GX
                                                                                                Q$LBDP=-001001
                                                                                                                               TD$TAR=-176372
TD$TAW=-176362
                                                                LD5
BYTE24= 000030
                                BYTE76= 000114
                                                                LOC.EN= 000100
                                                                                               O$LBP = 00000:
BYTE25= 000031
                                BYTE77= 000115
                                                                LOC:WA= 040000
                                                                                                Q$LDCD= 000003
                                                                                                                               TD$TDR= 176374
BYTE26= 000032
BYTE27= 000033
                                BYTE78= 000116
                                                               LOC:WB= 100000
MAREN1= 000001
                                                                                                Q$LDMD= 000004
                                                                                                                                TD$TDW=-176364
                                BYTE79= 000117
                                                                                                                               T$AD = 000020
T$BA = 000002
                                                                                                Q$LDPP=-002000
BYTE28= 000034
                                BYTE8 = 000010
                                                                MAREN2 = . 004000
                                                                                               Q$LHP - = 010000
Q$MNC - = 140000
BYTE29= 000035
                                BYTE80= 000120
                                                                MARLOD = 010000
                                                                                                                                      = 0000107
                                                                                                                                T$BD
BYTE3 = 000003
                                                                                               Q$MR - = 000052
Q$MRP = 000040
                                BYTE81 = 000121
                                                                MAROUT = 000002
                                                                                                                               T$B$0 -= 100000
BYTE30= 000036
                                                                MAR.LO= 002000
                                                                                                                                      = 000020
                                                                                                                                T$BT
BYTE31= 0000037
                                                                                               Q$MRP2=-000240
Q$MSC-=-040000
Q$MSET=-000004
Q$MSP-=-100000
                                BYTE83 = . 999123
                                                                MAR.OU= 000040
                                                                                                                                T$BTAR= 000030
BYTE32= 000040
                                BYTE84= 000124
                                                                MBKALL= 001000
MBKCLK= 000400
                                                                                                                               T$8TD.=.002000
T$CD =.000100
T$CLK.=.002000
BYTE33= 000041
                                BYTE05= 000125
BYTE34= 000042
                                BYTE86= 000126
                                                                MMADRD = . 000100
BYTE35= 0000043
                                BYTE87= 000127
                                                               MMLEFT= 000002
MMOE = 000004
MMURTE= 000010
                                                                                                Q$NCLK= 176000
                                                                                                                               T$DISK=-000200
T$DRD-=-000004
BYTE36 = . 000044
                                BYTE88= 000130
                                                                                                OSPP.
                                                                                                       = .000100
6'rTE37= 000045
                                                                                               Q$PPSW= 000320
Q$PPS = 000320
                                BYTE89= 000131
                                                                                                                    T$EMEM= 010000

T$FSAA= 0000000

T$FSAC= 0000000

T$FSAC= 000014

T$FSBC= 000010
BYTE38= 000046
                                BYTE9 = 000011
                                                                MNOBRE = 100000
BYTE39= 000047
                                BYTE90=-000132
                                                               MREN! = 000001
MREN2 = 020000
ВҮТЕ4 = попола
                                BYTE91= 000133
BYTE40= 000050
                                                                MSYN = 000040
                               BYTE92=-000134
                                                                                                Q$QLA:=:000053
BYTE41 = 000051
                               BYTE93 = . 000135
                                            Approved For Release 2005/07/12
                                                                                      CIA-RDP85-00514R00020001-3<sup>T$IB</sup> = 000026
```

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27-MAR-80 15:31 PAGE 8-2. Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
SYMBOL TA
T$1BAR= 000024
                                       WORD10= 000024
                                                                              WORD34= 000104
                                                                                                                     WORD57= 000162
                                                                                                                                                            WORD8 = 000020
T$IBE - 020000
T$IBF - 040000
T$ICD - 000040
                                       WORD11=-000026
                                                                              WORD35= 000106
                                                                                                                     WORD58= 000164
WORD59= 000166
WORD6 = 000014
                                                                                                                                                            WORD80= 000240
                                       WORD12= 000030
                                                                              WORD36= 000110
                                                                                                                                                            WORD81=:000242
WORD82= 000244
                                       WORD13=-000032
WORD14=-000034
                                                                              WORD37=-000112
T$MODE = . 004000
                                                                              WORD38 = 000114
                                                                                                                     WORD60 = 000170
                                                                                                                                                            WORD83=⋅
                                                                                                                                                                        000246
T$08 - - 000036
T$08E - - 00400A
                                       WORD15=-000036
                                                                              WORD39=-000116
                                                                                                                     WORD61= 000172
WORD62= 000174
                                                                                                                                                            WORD84= 000250
                                       WORD16= 000040
WORD17= 000042
                                                                               WORD4 = 000010
                                                                                                                                                            WORD85=-000252
T$0BF · = · 010000
                                                                              WORD40= 000120
WORD41= 000122
                                                                                                                     WORD63=-000176
                                                                                                                                                            WORD86= 000254
T$0BRA= ∙000034
                                       WORD18= 000044
                                                                                                                     WORD64= 000200
WORD65= 000202
                                                                                                                                                            WORD87=
                                                                                                                                                                         000256
                                                                                                                                                            WORD87 = 000256
WORD88 = 000260
WORD99 = 0000262
WORD90 = 0000264
WORD91 = 000264
WORD91 = 000260
WORD93 = 000270
WORD93 = 000272
WORD94 = 000274
T$0BWA= 000032
                                       WORD19= 000046
WORD2 - 000004
                                                                               WORD42= 000124
T$0UTA= 100000
                                                                               WCRD43≕ 000126
                                                                                                                     WORD66= 000204
T$RBDO=-000200
T$RNB-=-000040
T$RSET=-040000
                                       WORD20= 000050
                                                                                                                     WORD60--000206

WORD68--000210

WORD69--000212

WORD7--000016

WORD70--000214

WORD71--000216
                                                                               WORD44= 000130
                                       WORD21=-000052
WORD22=-000054
WORD23=-000056
                                                                               WORD45= 000132
                                                                              WORD46= 000134
WORD47= 000136
WORD48= 000140
T$SC: = 000022
T$SCLK= 020000
T$SEG!= 000000
                                        WORD24=-000060
                                       WORD25 = - 000062
                                                                               WORD49= 000142
T$SEG2= 000001
                                       WORD26=-000064
                                                                              WORD5 = 000012
WORD50= 000144
                                                                                                                     WORD72=-000220
WORD73=-000222
WORD74=-000224
                                                                                                                                                            WORD95= 000276
T$SEG3= 0000002
T$SO - 0000001
T$UBUS= 100000
                                        WORD27= 000066
                                                                                                                                                            WORD96= 000300
                                       WORD28= 000070
                                                                               WORD51= 000146
                                                                                                                                                            WORD97=-000302
WORD98=-000304
                                       WORD29=-000072
WORD3 =-000006
                                                                              WORD52=-000150
WORD53=-000152
                                                                                                                     WORD75= 000226
T$1CLK= 000400
                                                                                                                     WORD76=-000230
                                                                                                                                                            WORD99=
                                                                                                                                                                         000306
T$8BEN= : 000020
                                        WORD30= 000074
                                                                              WORD54= 000154
                                                                                                                     WORD77=-000232
WORD78=-000234
                                                                                                                                                            WRDVAL = . 000310
UBD.IN= 000020
                                       WORD31=-000076
                                                                               WORD55≃ 000156
                                                                                                                                                            XTREAD= 001000]
WORD0 = 000000
WORD1 = 000002
                                       WORD32=-000100
WORD33=-000102
                                                                              WORD56= 000160
                                                                                                                     WORD79= 000236
                                                                                                                                                            XTWRTE = 000400
 . ABS.
             000000
                               000
             000000
                               001
                               002
ERRORS DETECTED:
VIRTUAL MEMORY USED: 3210 WORDS (+13 PAGES)
DYNAMIC MEMORY: 3860 WORDS ( 14 PAGES)
ELAPSED TIME: 00:00:41
SP.SP/-SP=[20,1]IM,[20,1]SP
```

The land

```
SPLD..
               0-M1110 27-MAR-80 15:32
                                          32 PAGE 5
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                             .\ITLE - SPLD
.PSECT - SPLD
          000000
       23456789
                                                             MARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
                                                             SUBDOCUMENT PROCESSOR TEST ROUTINES
                                                             COMMANDS:
                                                                       LOAD SP MEMORIES
      10
      1 i
                                                            ONCE: A · COMMAND · HAS · BBEN · EXECUTED (OR · AN · ERROR · ENCOUNTERED)
THIS · MODULE · RETURNS · CONTROL · TO · THE · MODULE · SP · AT · LOCATION ·
                                                             SPXX:
      14
15
16
17
                                                             .MCALL WTSE$S.CLEF$S
      18
      19
     22222222223333333333344423
                                                            TABLE OF VALID SP MEMORY MNEMONICS AND ADDRESSES OF THEIR
                                                            ASSOCIATED ROUTINES.
         000000
                                                  LD5TBL::
         ававава
                                  130
                                                             .ASCII
                                                                       Z0XZ
                                                                                                     : QEX MEMORY
         000002
                    000302
                                                             .WORD
                                                                      LD5QX
         000004
                        123
                                  122
                                                             .ascıı
                                                                                                     :SUBREAD MEMORY
         йййййй
                    000332
                                                             . WORD
                                                                      LD5SR
         000010
                        123
                                  106
                                                             .ASCII
                                                                       ZSFZ
                                                                                                     ;SDLB · REFERENCE · PAGE
         000012
                    000322
                                                             .WORD
         000014
000016
                                  060
                                                             .ASCII
.WORD
                                                                                                     :SDLB - PAGE
                    0003123
                                                                      LD50B
         000020
                        123
                                  061
                                                             .ABCII
                                                                                                     :SIDMEM-1
         000022
                    000516
                                                             .WORD
                                                                      LD591
         000024
                       123
                                                             .ASCII
                                                                       7927
                                                                                                     :SIDMEM-2
         000026
                    000526
                                                             .WORD
                                                                      LD5S2
                    000006
                                                  LD5LN-
                                                                       <.-LD5TBL>/4
                                                            LOAD.
                                                            PERFORM THIRD LEVEL PARSING EG. IN THE COMMAND: SPOLD QX 0
     44
45
46
                                                            PARSE THE TOX!
      47
         000030
                                                  LD5::
      48
         000030
                                                                      FIND
                                                                                                     :LOCATE MEMORY MHEMONIC IN COMMAND LINE
      49
         000034
                    103004
                                                            BCC.
CALL
                                                                       1$
                                                                                                     ;OK, CONTINUE
      50
         000036
                                                                      FRR4
                                                                                                       MISSING OPERAND:
     51
52
53
54
         000042
                   000167
                                                            MATCH THE MNEMONIC IN THE CONNAM CONE AGAINST THE TABLE OF VALID MNEMONICS
                             000632
         000046
                   012700
                             000006
                                                  1$:
                                                            MOV
                                                                                                     ; NUMBER OF TABLE ENTRIES
                                                                      #LD5LH,R0
         000052
                   012702
                             000000
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```

SPLD --- MACRO M1110 27-MAR-80 15:32 PAGE 5-1 Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

```
58
      000056
                                                                                   SCAN
                                                                      GALL
                                                                                                                        :MATCH - AGAINST - COMMAND - LINE
  59
      000062
                   103004
                                                                      BCC.
                                                                                   2$
                                                                                                                        : MATCH - WAS MADE -
      000064
                                                                      CALL
                                                                                  ERR7
                                                                                                                        : "INVALID TEMORY THE MORATCH
 61
      000070
                  000167
                                                                      IMP.
                                                                                  LD5X
 62
 63
                                                                     SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
 64
 65
66
                                                                     1. START-ADDRESS ONLY, REPEAT-PROMPT-FOR EACH MEMORY LOCATION FROM THE START-ADDRESS FORWARD, NB. END OF MEMORY (AS DETECTED) BY THE QMAIN-SUBROUTINE PDATA) OR A < CR> RESPONSE TO THE PROMPT.
  67
  68
  69
70
                                                                           WILL TERMINATE THE LOAD.
                                                                           SP>LD QX 0
                                                                                                                                                  J. 1 = 1
                                                                                                                                                            ુલી કે તેફ જિલ્લોફ
                                                                          SP>LD QX 0
START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF
  71
72
73
74
75
76
77
                                                                          START HDDRESS, LOUP INDICATOR, LOUP ON THE LUMPING OF STARTS ONE MEMORY LOCATION ONLY.

SPXLD QX 0 L

START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE

PROMPT AND FILL MEMORY (BETWEEN START AND END ADDRESSES)
                                                                          WITH THIS VALUE.
SP>LD QW 0 7
                                                                          START ADDRESS, END ADDRESS, LOOP INDICATOR, ISSUE ONLY ONE PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START) AND END ADDRESSES) WITH THIS VALUE.
  79
  80
  81
                                                                           SP>LD-QW-0 7 L-
  83
  84
      000074
                  010167
                                DODDDDDD
                                                                     MOV-
                                                         2$:
                                                                                  R1.RTNPT.
                                                                                                                        ;SAVE POINTER:
;LOCATE START ADDRESS IN COMMAND LINE:
;OK, CONTINUE
  85
      000100
                                                                     CALL
                                                                                  FIND
 86
87
      000104
                                                                     BCC -
                                                                                   3$
      000106
                                                                     CALL
                                                                                  ERR4
                                                                                                                         : "MISSING OPERAND:
  88
      000112
                  000167
                                                                      JMP.
                                                                                   LD5X
                                                                                                                        :EXIT-
  89
      000116
                                                         3$:
                                                                     CALL
                                                                                  PACK
                                                                                                                        CONVERT COMMAND LINE VALUE TO BINARY
 98
      000122
                   103004
                                                                     BCC.
                                                                                   4$
                                                                                                                         : CONVERSION SUCCESSFUL
  91
      000124
                                                                                  ERR5
                                                                     CALL
                                                                                                                         : "INVALID - NUMERIC - VALUE "
      000130
                   000167
                                000544
                                                                      JMP.
                                                                                   LD5X
 93
 94
      000134
                   016767
                                000000G · 000000G · 4$:
                                                                                  BINWD, MSTRT.
BINWD, MSTR2.
                                                                     MOV.
                                                                                                                        #SAVE LOADING START ADDRESS #SAVE IT TWICE (FOR REFRESH ON LOOP) #INIT END ADDRESS
 95
      000142
                  016767
                                000000G · 000000G
      000150
                  012767
                                177777
                                            000000G
                                                                     MOV.
                                                                                   #-1.MEND.
 97
98
                                                                     START ADDRESS HAS BEEN FOUND, SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE), IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT,
 99
100
101
      000156
102
                                                                     CALL
                                                                                  FIND
                                                                                                                         ; SCAN · COMMAND · LINE
103
      000162
                   103004
                                                                     BCC
                                                                                                                        SOMETHING THERE.
104
      000164
                   052767
                                000000G - 000000G
                                                                                  #RP,BASE
                                                                     BIS
195
      000172
                  000437
                                                                                  9$
                                                                                                                         ;JUMP TO RTH
106
107
      000174
                                000114
                                                                     CMPB
                                                                                  #*L,(R1)
                                                                                                                        :LOOP INDICATOR
108 000200
109 000202
                  001006
                                                                     BNE -
                                                                                                                        #NO. MUST-BE-USPER-ADDRESS:
#SET-END-ADDR-=-START-ADDR-
#HOW-TO-STOP-LOOP-
                                                                                  6$
                  016767
                                000000G 000000G
                                                                      MOV.
                                                                                  MSTRT, MEND
110
      000210
                                                                     CALL
                                                                                  HANG
111
112
      000214
                  000426
                                                                                                                         :JUMP · TO · RTH ·
                                                                                  9$
                                              6$: GALL PACK CONVERT UPPER ADDRESS OK CONTINUE

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113 000216
114 000222
                  103004
```

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115 000224
                                                                                       : INVALID-NUMERIC
116
    000230
             000167
                      000444
                                                   .IMP -
                                                            LD5X
                                                                                       ;EXIT-
117
                                                  SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION-4)....
118
120
121
    000234
             016767
                       000000G 000000G 7$:
                                                   MOV
                                                            BINWD, MEND.
                                                                                        :SET.UP.END.ADDRESS
122
    000242
                                                   CALL
                                                            FIND
                                                                                       :CHECK FOR LOOP INDICATOR
123
    000246
                                                   BOS.
                                                            9$
                                                                                       :NO-LOOP-
124
    000250
              122711
                                                   CMPB
                                                                                       CORRECT INDICATOR
                                                            #*L,(R1)
125
    000254
             001404
                                                   BEQ.
                                                                              ; YES, CONTINUE;
LOOP-OPTION-ERROR
                                                            8$
    000256
126
                                                   CALL
                                                            ERR11
127
    000262
             000167
                       000412
                                                   TMP.
                                                            1.059
128 - 000266
                                         8$:
                                                   CALL
                                                            HANG
                                                                                       :HOW-TO-STOP-LOOP
130
    000272
             016701
                       000000G
                                         9$:
                                                   MOV.
                                                           RTHPT,R1
                                                                                       : POINT . TO . ROUTINE
131
    000276
             000171
                                                   JMP .
                                                            @(R1)
                                                                                        JUMP TO ROUTINE
132
133
134
                                                   LOAD · QEX · MEMORY ·
135
    000302
             012767
                       000004
                                000000G.LD50X::
                                                  MOV
                                                            #S$QX,CODE
                                                                                       :SET-MEMORY-SELECT-CODE - = - QEX-
137
    000310
             000420
                                                   BR
                                                           LD50
138
i39
                                                   LOAD · SDLB · PAGE · MEMORY ·
140
141
    000312
             012767
                       000005 000000G LD5QB::
                                                  MOV
                                                           #S$QB,CODE
                                                                                       :SET-MEMORY-SELECT-CODE-=-SDLB PAGE
142-000320
             000414
                                                           LD50
143
                                                                                                                   144
                                                   LOAD · QLB · REFERENCE · PAGE
                                                                                                                  * com grandel
145
146
    000322
                                         LD5QR::
147
    000322
             012762
                       0000061
                               000000G
                                                            #S$QR,CODE
                                                                                       SET MEMORY SELECT
148
    000330
             000410
                                                           LD50
149
150
151
                                                  LOAD SUBREAD MEMORY
152.000332
    000332
             012767
                       000007
                               000000G
                                                   MOV
                                                            #S$SR,CODE
154
155
    000340
             016746
                       0,00000G ·
                                                                                       :SUPPLY-UPPER-MEMORY LIMIT
                                                  MOV:
                                                           SRHIGH,-(SP)
    000344
             016746
                       000000G
                                                  MOV.
                                                           SRLOW,-(SP)
                                                                                       ;LOWER LIMIT
156
    000356
             000404
                                                           LD5G0
157
    000352
                                         LD5Q:
158 000352
159 000356
             016746
                       000000G
                                                           SQHIGH,-(SP)
                                                  MOV.
                                                                                       :SUPPLY-UPPER-MEMORY LIMIT-
             016746
                       000000G
                                                  MOV.
                                                           SQLOW,-(SP)
                                                                                       :LOWER LIMIT
160
    000362
                                         LD5G0:
161
    000362
                                                  CALL.
                                                           BUFSET.
                                                                                       :PREPARE · FOR · LOAD ·
162 000366
             103002
                                                  BCC
                                                            1$
                                                                                       OK, CONTINUE
163
             000167
    000370
                      000304
                                                   JMP
                                                           LD5X
                                                                                       :ERROR, EXIT
    000374
165
             032767
                      000000G 000000G 1$:
                                                           #RP,BASE
                                                  BIT.
                                                                                       ; REPEAT · PROMPT ·
166
    000402
                                                                                       READ DATA FROM COMMAND TIME :END OF MEMORY
             001414
                                                  BEQ.
                                                           5$
167
    000404
                                         2$:
                                                  CALL
BCS
                                                           PDATA-
168
    888418
              103401
                                                                                       ;END-OF-MEMORY-
;NO-<CR> RESPONSE, CONTINUE
                                                           3$
    000412
             102002
169
                                                  ₿VC
170 000414
                                         3$:
171 000414
             000167
                      000260
                                 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
```

SPLD----

0 M1110

SPLD----MACRO-M1110 27-MAR-80 15:32 PAGE 5-3 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

172 173 000420 174 000420 175 000424 176 000432 177 178	066767 000764	; 49 000000G · 000000G ·	CALL · ADD · BR	LOD5M1 INCVAL,MSTR2. 2\$ ONCE:THEN:FILL:MEMORY.	:LOAD-16 BIT-MEMORY :BUMP-ADDRESS : . :REPEAT-	Marian state
180 000434 181 000440 182 000442 183 000444 184 000444 185	103401 102002 000167	; 54 000230	BCS BVC	PDATA 6\$ 7\$ LD5X	:PROMPT: :END:OF:MEMORY: :NO: <cr> RESPONSE, CONTINUE:</cr>	1995 V.P.
186 000450 187 000450 188 189 000454 190 000462 191 000472 193 000500 194 000502 195 000506 196 000514	066767 026767 101767 032767 001002 000167 016767	7\$ 000000G.000000G. 000000G.000000G.	CALL · ADD · CMP · BLOS · BIT · BNE · JMP ·	LOD5M1 INCVAL,MSTR2. MSTR2,MEND. 7\$ #LOOP,BASE. 8\$ LD5X MSTRT,MSTR2. 7\$:LOAD 16 BIT MEMORY :ADVANCE ADDRESS :HAS UPPER MEMORY LIMIT BEEN :NO. CONTINUE :LOOP ON . :YES. CONTINUE :REINITIALIZE ADDRESS	REACHED

SPLD... O - M1110 27-MAR-80 15:32 PAGE :32 PAGE 6 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 198 LOAD SIDMEM (MULTIPLE PAGES) 199 200 000516 000516 012767 281 000010 ' 000000G MOV #S\$S1,CODE :SELECT - SIDMEM - 1 202 000524 000403 BR LD5S 203 000526 294 000526 012767 000014 -000000G MOV. #S\$S2,CODE ; SELECT SIDMEM 2 205 000534 LD59: 206 000534 016746 000000G SDHIGH,-(SP) MOV-;SUPPLY-UPPER-MEMORY LIMIT 287 999549 016746 000000G MOV. SDLOW, - (SP) ;LOWER LIMIT ;PREPARE FOR LOAD ;OK, CONTINUE ;ERROR, EXIT 000544 208 CALL BUFS3 209 000550 103002 BCC. 1.5 210 000552 000167 000122 JMP LD5X 211 000556 032767 000000G 000000G 1\$: BIT. #RP.BASE :REPEAT PROMPT 213 000564 001414 BEQ. 5\$:NO, ONCE ONLY 214 215 000566 A William CALL PDATA ;READ DATA FROM COMMAND LINE ;END OF MEMORY 000572 103401 BCS: 216 000574 102002 BVC. 4\$;NO <CR> RESPONSE, CONTINUE 217 218 219 000576 3\$: 000167 000576 000076 JMP . LD5X 220 000602 4\$: 221 222 000602 CALL -LOD5M3 :LOAD 48 BIT MEMORY 223 000606 000614 866767 000000G · 000000G ADD. INCVAL, MSTR2. ;BUMP · ADDRESS 224 225 000764 : REPEAT. 226 PROMPT ONCE THEN FILL MEMORY 227 228 · 000616 CALL 5\$: PDATA: ; PROMPT 229 000622 103401 :END-OF-MEMORY :NO-<CR> RESPONSE, CONTINUE BCS -K\$ 230 231 000624 102002 7\$ 000626 6\$: 000626 000167 000046 JMP -LD5X 233 234 000632 7\$: 000632 CALL LOD5M3 :LOAD 48 BIT MEMORY 000636 000644 237 066767 000000G · 000000G ADD : INCVAL, MSTR2 :ADVANCE - ADDRESS #HAS UPPER MEMORY LIMIT BEEN RÉACHED #LOOP ON 238 026767 CMP - BLOS 000000G · 000000G MSTR2, MEND 239 000652 101767 アま 249 000654 832767 000000G · 000000G #LOOP BASE 241 000662 001002 BHE 8\$;YES, CONTINUE 242 000664 000167 000010 LD5X JMP. 243 000670 244 000676 016767 000755 000000G-000000G-8\$: MOV. MSTRT, MSTR2 "" " ;REINITIALIZE ADDRESS BR 245 246 000706 000706 000704 247 #S\$CLR,-(SP) 248 012746 000000 MOV. :CLEAR - SP :WRITE-TO-CONTROL REG: :CLEAR-PROMPT-FLAG: :KILL-AST-(IF-THERE-WAS-ONE) 249 CALL BIC-SPCR 250 000710 042767 000000G · 000000G #RP.BASE 251 000716 CALL KILL 252.000722 000167 000000G IMP .

f.

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SPLD-----MACRO-M1110 27-MAR-80 15:32 PAGE 7 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

```
254
255
                                                           LOAD SINGLE WORD MEMORY.
256
257
     000726
                                                ĹOD5M1:
258 00072€
                012746
                           000001
                                                           MOV-
                                                                      #S$LA,-(SP)
                                                                                                      :ADDRESS SELECT:
:SEND:TO:SP:CONTROL:REG:
:ACTUAL:ADDRESS:
:SEND:TO:SP:
259
     000732
                                                           CALL
                                                                      SPCR
269
     000736
                016746
                           000000G
                                                           MOV
                                                                      MSTR2,-(SP)
261
     000742
                                                           CALL
262
263
     000746
                016746
                           000000G
                                                           MCV.
                                                                      CODE,-(SP)
                                                                                                      ;SELECT MEMORY
     000752
                                                           CALL
                                                                      SPCR
264
     000756
                016746
                           авававь
                                                           MOV.
                                                                      DATA1.-(SP)
                                                                                                      :DATA WORD FOR MEMORY :SEND DATA TO SP
265
     000762
                                                           CALL
                                                                      LBSP
266
267
     000766
                                                           RETURN
268
                                                           LOAD-3 WORD-MEMORY-
269
270
271
     000770
000770
                                                LOD5M3:
                                                           SAVE
                                                                      CODE, DATA1
272.
     001000
                                                           CALL
                                                                      LOD5M1
                                                                                                      ;LOAD·WORD A:
;SELECT·WORD·B
;SET·UP·DATA1
     001004
                005267
                           000000G
                                                           INC MOV
                                                                      CODE
274
     001010
                016767
                           000000G - 0000000G -
                                                                      DATA2,DATA1
275
     001016
                                                           CALL
                                                                      LOD5M1
                                                                                                      :LOAD·WORD B:
:SELECT·WORD·C:
:SET·UP·DATA1
                005267
016767
276
     001022
                           000000G
                                                                      CODE
                           000000G 000000G
277
     001026
                                                           MOV:
                                                                      DATA3, DATA1
278 001034
                                                           CALL
RESTOR ·
RETURN ·
                                                                     LOD5M1
CODE.DATA1
                                                                                                      :LOAD WORD C
279
     001040
280 001050
281
282
                000001
                                                           .END
```

THE STREET STREET STREET STREET

```
PO M1110 27-MAR-80 15:32 PAGE 7-1
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
SYMBOL TA
ALUCKE = . 040000
                                BYTE39 = . ЯЯЯЯ47
                                                                BYTE90=-000132
BYTE91=-000133
BYTE92=-000134
                                                                                                LOC:WA= 040000
                                                                                                                                Q$ICP-=-000006
ALUOE - = · 004000
A01 = · 010000
BASE · = · *******
                                BYTE4 = 000004
                                                                                                LOC:WB= 100000
                                                                                                                                Q$IHB = 000003
                                BYTE40= 000050
                                                                                                LOD5Mi
                                                                                                          000726R
                                                                                                                                Q$IHRL= 000002
        = · *******
                                BYTE41=:000051
                                                                BYTE93= 000135
                                                                                                LOD5M3
                                                                                                          000770R
                                                                                                                           002.Q$IMRP=.000007
BYTE42= 000052
                                                                BYTE94= 000136
                                                                                                                                Q$LBD = .001000
                                                                                                L00P - * ****** GX
BITYAL = 000000
                                BYTE43= · 000053
                                                                                                MAREN1 = . 000001
MAREN2 = . 004000
                                                                BYTE95= 000137
                                                                                                                                Q$LBDP= 001001
BITO
        = 0000001
                                BYTE44= 900054
                                                                BYTE96= 000140
                                                                                                                                Q$LBP - - 000001
BITI
           000002
                                BYTE45 = . 000055
                                                                BYTE97= 000141
                                                                                                MARLOD = 010000
                                                                                                                                Q$LDCD= 000003
BIT10
          002000
                                BYTE46 = . 000056
                                                                BYTE98= 000142
                                                                                                MAROUT= 000002
                                                                                                                                Q$LDMD=-000004
BIT11
          004000
                                BYTE47 = . 000057
                                                                BYTE99= 000143
                                                                                                MAR.LO= 002000
MAR.OU= 0000040
                                                                                                                               0$EDPP= 002000
0$EHP = 010000
0$MNC = 140000
          010000
BIT12
                                BYTE48= 000060
                                                                BYTVAL = 000144
                                                                                                MBKALL = 001000
MBKCLK = 000400
MEND = ********
BIT13
          020000
                                BYTE49= .000061
                                                                CBKALL= 001000
          040000
                                BYTE5 = 000005
                                                                CBKCLK= 000400
                                                                                                                                Q$MR = 000052
Q$MRP = 000040
                                BYTE50= 000062
BIT15
          100000
                                                                CNOBRE = 100000
CODE - = *********** GX-
CPCCEN = ***010000
                                                                                                                   GX
BIT2
          ййййй4
                                BYTE51 = . 000063
                                                                                                MMADRD= 000100
MMLEFT= 000002
MMOE = 000004
                                                                                                                               U$11RF = 000040

U$MRP2= 000240

U$MSC = 040000

U$MSET= 000004

U$MSP = 100000
BIT3
          000010
                                BYTE52= 000064
BIT4
          000020
                                BYTE53= 0000065
                                                                CPREAD = 040000
CPWRTE = 020000
BIT5
          000046
                                BYTE54= 000066
                                                                                                MMWRTE = . 000010
          000100
BIT6
                                BYTE55=-000067
                                                                CSADRD = 000004
                                                                                                MNOBRE = 100000
                                                                                                                      0$NCLK= 176000
0$PP = 000100
BIT7
          000200
                                BYTE56= . 000020
                                                                CSEQCI=-100000
                                                                                                MREN1 = 000001
BITS
          000400
                                BYTE57= 000071
                                                                CSOE - - 000040
CSWRTE - 000100
                                                                                                MREN2 = 020000.
MSTRT = ****** GX
                                                                                                                               Q$PPSW= 000320
Q$PP2 = 000300
Q$QHLT= 000013
BIT9
          001000
                                BYTE58= 000072
BUFSET= -
                                                                DATA1 = · *******
DATA2 · = · *******
          жжжжжж БУ
                                BYTE59= 0000073
                                                                                                MSTR2 - =
                                                                                                          · жжжжжж. <u>Б</u>Ж.
BUFS3
          ****** GX:
                                ВҮТЕб = плилия
                                                                                    GX
                                                                                                       = . 000040
                                                                                                MSYN -
                                                                                                                                Q$QL
                                                                                                                                          000043
BYTEØ = ·
          000000
                                BYTE60= 000074
                                                                DATA3 = ******
                                                                                                          000144
                                                                                                                               Q$QLA - = 000053
Q$QLB - 000054
BYTE! = · 000001
                                BYTE61= 000075
                                                                DBR:RD= 000001
                                                                                                PACK -
BYTE10=
          000012
                                BYTE62= nnnnz6
                                                                DB$CPP= 001457
                                                                                                PDATA-
                                                                                                                                Q$QLR∙=∙000001
Q$QW =∙000042
                                                                                                          жжжжжж БХ-
BYTE!1= 000013
BYTE!2= 000014
                                BYTE63 = . 000077
                                                                DB$SPT= 000026
DB$TPC= 000023
                                                                                                PLB.
                                                                                                          000010
                                BYTE64= 000100
                                                                                                PLC.
                                                                                                          000020
                                                                                                                                Q$RDCD= 000005
BYTE13= 000015
                                BYTE65= 000101
                                                                DISPGS= 100000
                                                                                                PLD
                                                                                                          000030
                                                                                                                                Q$RDMD= 000006
BYTE14= 000016
                                BYTE66= 000102
                                                                DMAAWR = . 000005
DMARRD = . 000003
                                                                                                PLRWR.
                                                                                                       - 000200
                                                                                                                                Q$REBK=:001000
BYTE15= 000017
                                BYTE67 = . 000103
                                                                                                                               Q$RNC. $ 006000:
Q$RSG $ 004000
Q$RSET 000010
Q$SM $ 100000
Q$SP $ 000120
                                                                                                PLR:EN= 000200
BYTE16= 000020
                                BYTE68= 000104
                                                                DMARWR = . 000004
                                                                                                QR$CR1= 176420
QR$CR2= 176422
BYTE17= 000021
                                BYTE69= 000105
BYTE7 = 000007
                                                                ENBR
                                                                       = 010000
BYTE18= 0000022
                                                                ERR11
                                                                                                QR$LBR= 176424
BYTE19= 000023
BYTE2 = 000002
                                BYTE70= 000106
                                                                ERR4
                                                                        =·жжжжжж GX
                                                                                                Q$ATTH= 000100
                                BYTE71= 000107
                                                                ERR5
                                                                        = · ******* GX
                                                                                               Q$BCL = 000001
Q$CCCP = 000040
                                                                                                                                Q$SP2·=·000340
BYTE20= 000024
                                BYTE72= 000110
                                                                ERR7
                                                                        **********
                                                                                    GX
                                                                                                                                RGQ.EN= 000200
BYTE21 = . 000025
                                BYTE73= 000111
                                                                FIND
                                                                        = · ********* GX
                                                                                                Q$CHB = 000400
                                                                                                                                RGQ.VA= 020000
RP = *******
BYTE22= 000026
                                BYTE74= 000112
                                                                HANG -

⇒ ************ GX

                                                                                                Q$CHRL= 000200
                                                                                                                                RP = ****** GX
RTNPT = ****** GX
BYTE23= 000027
                                BYTE75= .000113
                                                                INCVAL = * ******** GX
                                                                                                Q$CLR - = - 000040
BYTE24= 000030
                                                                                                Q$CNC = 030000
                                BYTE76= 000114
BYTE77= 000115
                                                                       = · жжжжжжж GX
                                                                KILL.
                                                                                                                                SCAN = >×××××××× GX
BYTE25= 000031
                                                                                                       = 000060
                                                                LBSP -
                                                                        =·********* GX
                                                                                                Q$CP.
                                                                                                                               SDHIGH= ****** GX
SDLOU'= ***** GX
BYTE26=-000032
                                                                                          002 0$CPCC = 000000
002 0$CPCC = 000000
002 0$CP2 = 000000
0$CSC = 000000
002 0$CSEL = 000002
                                BYTE78= 000116
                                                                1.05
                                                                          000030RG
BYTE27 = PAAAA33
                                BYTE79= 000117
                                                                LD5G0
                                                                          000362R
                                                                                                                                SEQ.CF= 000010
BYTE28= 000034
                                BYTE8 = 000010
                                                                LD5LN -=
                                                                          000006 G
                                                                                                                                SPCR
                                                                                                                                       := - ********
BYTE29= 000035
                                BYTE80= 000120
                                                                          000352R
                                                                                                                               'ISPSXX' =, ******
                                                                                                                                                   GX
BYTE3 = 000003
                                BYTE81= 000121
                                                                LD50B
                                                                          000312RG
                                                                                                                                SQHIGH= ********
                                                                                                                                                   GΧ
BYTE30= 000036
BYTE31= 000037
                                BYTE82= 000122
                                                                LDSOR
                                                                          000322RG
                                                                                           002.Q$CSP = 020000
                                                                                                                                SQLOW = ***** GX
                                BYTE93= 000123
                                                                LD5QX
                                                                          000302RG
                                                                                          002.Q$DMA.=.000001
002.Q$ENBK=.04000
                                                                                                                                SRHIGH= *****
BYTE32= 000040
BYTE33= 000041
                                                                                                                                                   GX
                                BYTE84= 000124
                                                                           000534R
                                                                LD59
                                                                                                                                SRLOW = жжжжжж GX
                                BYTE85 = . 000125
                                                                          000332RG
                                                                                           002 Q$ENOP= 020000
                                                                                                                                S$CLR = 000000
S$LA = 000001
                                                                LD5SR
BYTE34= 000042
                                BYTE96 = . 000126
                                                                LD581
                                                                          000516RG
                                                                                          002.Q$FAL.=.004000
BYTE35= 000043
                                BYTE87= 000127
                                                                LD582
                                                                          000526RG
                                                                                           002 Q$FC
                                                                                                          000045
                                                                                                                                S$0R
                                                                                                                                        = 0000005
ВҮТЕЗ6 = - ЯЯЯЯ44
                                BYTE88= 000130
                                                                LDSTBL
                                                                          DODDODDO
                                                                                           002·Q$FO·
                                                                                                          000044
                                                                                                                                S$QR
BYTE37= 000045
                                                                                                                                          . 000006
                               BYTE89= 000131
                                                                LD5X
                                                                          000700R
                                                                                          002 Q$FP
                                                                                                        = . 000046.
BYTE38= 000046
                               BYTE9 = 000011
                                            Approved For Release 2005/07/<u>42</u>
                                                                                         IA-RDP85-005(4R0002000200091-3<sup>S$SR</sup>
```

with Miles

SPLD . . . M

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        SPLD....MACRO.M1110
        27-MAR-80
        15:32
        PAGE 7-2

        SYMBOL.TABLE
        Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

S$S1··≃·000010
S$S2· ≃·000014
                                      T$IBE·=·020000
                                                                          WORD17= 000042
                                                                                                              WORD46=-000134
                                                                                                                                                   WORD74= 000224
                                     T$IBF - - 040000
T$ICD - - 000040
                                                                          WORD18 = 000044
                                                                                                              WORD47= 000136
 TD$CTR= 176370
                                                                                                                                                   WORD75= 000226
                                                                          WORD19= 000046
                                                                                                              WORD48=-000140
TD$CTW= 176360
TD$INL= 004000
                                                                                                                                                   WORD76= 000230
WORD77= 000232
                                     T$MODE= 004000
                                                                          WORD2 - 000004
                                                                                                              WORD49= 000142
WORD5 = 000012
                                     T$0B+
                                             = 000036
                                                                          WORD20= 000050
WORD21= 000052
WORD22= 000054
 TD$MEM= . 000270
                                                                                                                                                   WORD78= 000234
                                     T$0BE - 004000
TD$0AR = · 176344
TD$0TR = · 176346
                                                                                                              WORD50= 000144
                                     T$0BF - = - 010000
                                                                                                                                                   WORD79= 000236
                                                                                                              WORD51=-000146
WORD52=-000150
WORD53=-000152
                                                                                                                                                   WORD8 = 000020
                                     T$0BRA= 000034
                                                                          WORD23=:000056
WORD24=:000060
WORD25=:000062:
                                                                                                                                                   WORD80= 000240
 TD$QRD= 000274
                                     T$0BWA= 000032
 TD$SW-=-176376
                                                                                                                                                   WORD81= 000242
                                     T$0UTA= 100000
                                                                                                              WORD54= 000154
 TD$TAR= . 176372
                                                                                                                                                   WORD82= 000244
                                     T$RBD0= 000200
T$RNB = 000040
                                                                          WORD26=-000064
WORD27=-000066
                                                                                                              WORD55=-000156
                                                                                                                                                  WORD83= 000246
WORD84= 000250
WORD85= 000252
 fD$TAW= 176362
fD$TDR= 176374
                                                                                                              WORD56= 000160
WORD57= 000162
                                     T$RSET= 040000
                                                                          WORD28=-000070
 ſD$TDW= 176364
                                     T$SC: =:000022
T$SCLK=:020000
                                                                         WORD29= 000072
WORD3 = 000006
                                                                                                              WORD58= 000164
                                                                                                                                                  WORD86 - 000254/,
WORD87 - 000256
 ĭ$AD· = 000020
                                                                                                              WORD59= 000166
 T$BA - - 000002
                                     T$SEG1=-000000
                                                                          WORD30=.000074
                                                                                                              WORD6 = 000014
T$BD - - 000010
T$BSO - - 100000
T$BT - - 000020
                                                                                                                                                  WORD88=7000260
WORD89=-000262
                                     T$SEG2= 0000001
                                                                          WORD31= 000076
                                                                                                              WORD60=-000170
WORD61=-000172
                                     T$SEG3= 000002
                                                                         WORD32= 000100
WORD33= 000102
                                                                                                                                                   WORD9 = 000022
                                     T$SO - 000001
T$UBUS- 10000
T$BTAR = 000020
T$BTAR = 000030
T$BTD = 002000
T$CD = 000100
T$CLK = 002000
                                                                                                              WORD62= 000174
                                                                                                                                                  WORD90= 000264
WORD91= 000266
WORD92= 000270
                                                                          WORD34= 000104
                                                                                                              WORD63=-000176
WORD64=-000200
                                     T$1CLK= 000400
                                                                         WORD35= 000106
                                     T$8BEN= 000020
                                                                         WORD36=-000110
                                                                                                              WORD65= 000202
                                                                                                                                                  WORD93= 000272
                                     UBD: IN= 000020
                                                                         WORD37= 000112
                                                                                                              WORD66= 000204
WORD67= 000206
T$DISK=-0002000
T$DRD-=-0000004
                                                                                                                                                   WORD94=.000274
                                     WORD0 = 000000
WORD1 = 000002
                                                                         WORD38 = 000114
WORD39 = 000116
                                                                                                                                                   WORD95= 000276
                                                                                                              WORD68 - 000210
                                                                                                                                                  WORD96= 000300
WORD97= 000302
 T$EMEM=:010000
                                     WORD10= 000024
                                                                          WORD4 - 000010
                                                                                                              WORD69-000212
WORD7 -000016
 T$FSAA= 000000
                                     WORD11= 000026
                                                                         WORD40= 000120
WORD41= 000122
T$FSAB= 000004
                                                                                                                                                   WORD98= 000304
                                     WORD12=-000030
WORD13=-000032
                                                                                                              WORD70= 000010
T$FSAC= 000014
T$FSB2= 000010
T$IB = 000026
                                                                                                                                                  WORD99= 000306
                                                                          WORD42= 000124
                                                                                                             WORD71= 000216
WORD72= 000220
                                                                                                                                                  WRDVAL = . 000310
                                     WORD14= 000034
                                                                         WORD43=-000126
                                                                                                                                                  XTREAD= 001000
                                     WORD15= 000036
WORD16= 000040
                                                                         WORD44= 000130
                                                                                                              WORD73= 000222
T$IBAR= 000024
                                                                                                                                                  XTWRTE = . 000400
                                                                         WORD45= 000132
  ABS:
            опород
                             000
            000000
                             001
SPLD.
                             002
ERRORS DETECTED:
                           0
VIRTUAL MEMORY USED: 3456 WORDS (+14 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
DYNAMIC MEMORY: 4916 W
ELAPSED TIME: 00:00:46
SPLD, SPLD/-SP=[20,1]IM,[20,1]SPLD
```

LEVEL BOOK BOOK TO THE

```
MACRO M1110 27-MAR-80 15.33 PAGE For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3
SPPR-
                                                               .FITLE. SPPR
         000000
       234567
                                                               .PSECT: SPPR
                                                               HARDWARE QUERY RESOLVER 'MANUAL' DEBUGGING AIDS
                                                    ;
                                                               SUBDOCUMENT PROCESSOR TEST ROUTINES
      8
9
10
11
                                                               COMMANDS:
                                                                         PRINT-SP-MEMORIES-
                                                              ONCE:A:COMMAND:HAS:BBEN:EXECUTED (OR:AN:ERROR:ENCOUNTERED)
THIS:MODULE:RETURNS:CONTROL:TO:THE:MODULE:SP:AT:LOCATION:
      13
14
15
                                                               'SPXX'.
      16
17
18
                                                               .MCALL WTSE$S,CLEF$S
      19
      20
21
22
23
                                                              TABLE OF VALID SP MEMORY MNEMONICS AND ADDRESSES OF THEIR ASSOCIATED ROUTINES
         000000
                                                    PR5TBL::
      24
25
          000000
                         121
                                   130
                                                               .ASCII
                                                                         ZQXZ
PR5QX
                                                                                                        ; QEX: MEMORY
                    000316
          000002
                                                               .WORD
      26
27
          000004
                        123
                                   122
                                                               .ASCII
                                                                         /SR/
                                                                                                        ; SUBREAD · MEMORY ,,
          000006
                    000346
                                                               .WORD
      29
29
30
31
         000010
                         123
                                   106
                                                               .ASCII
         000012
                    000336
                                                               .WORD.
                                                                         PR5QR
         000014
000016
                        123
                                   060
                                                                         ZSAZ
                                                                                                        ; SDLB PAGE
                    000326
                                                               .WORD
                                                                         PR50B
      32
33
          000020
                        123
                                   061
                                                               .ASCII
                                                                         /S1/
                                                                                                        :SIDDENEY
          000022
                     000470
                                                               .WORD
      34
35
36
37
38
39
          000024
                                   062
                                                               ASCII.
                                                                         /S2/
                                                                                                        STOMEM 2
                    0005001
          000026
                                                                         PR5S2
                                                               .WORD
                     000030
                                                    PR5LN
                                                                         <.-PR5TBL>
      40
41
42
43
                                                              PRINT:
                                                              PERFORM THIRD LEVEL PARSING
EG. IN THE COMMAND:
SP>PR QX 0
     44
45
46
                                                              PARSE THE 'OX'
      47
         000030
                                                    SPPR5::
      48
49
         000030
                                                              CALL
BCC:
                                                                         FIND
                                                                                                        ;LOCATE MEMORY MNEMONIC IN COMMAND LINE :OK, CONTINUE : MISSING OPERAND:
         000034
                    103004
                                                                         15
      50
         000036
                                                                         ERR4
     51
52
         000042
                    000167
                              000614
                                                                         PR5X
                                                                                                        :EXIT-
     53
54
55
                                                              MATCH: THE: MNEMONIC: IN: THE: COMMAND: LINE: AGAINST: THE: TABLE OF VALID: MNEMONICS:
                                                                                              NUMBER OF TABLE ENTRIES
                  012700 000030
012702 000000
     56
         000046
                                                    1$:
                                                              MOV
                                                                         #PR5LN,R0
         000052
                                           Approved For Release 2005/07/12 CIA-RDP85-00514R000200020004-3
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SPPR-
                                                 33 PAGE 5-1
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                  0 · M1110
                               27-MAR-80 15:33
                                                                        GALL
                                                                                    SCAN
                                                                                                                        : MATCH - AGAINST - COMMAND - LINE :
           000062
                       103004
                                                                                                                        MATCH WAS MADE
MATCH WAS MADE
MEMORY MNEMONICS
                                                                        BCC+
                                                                                    2$
           000064
                                                                        CALL
                                                                                    FRR7
       61
62
           000070
                       000167
                                   000566
                                                                                    PR5X
       63
                                                                        SAVE POINTER TO ROUTINE ASSOCIATED WITH THE MEMORY MNEMONIC SCAN THE REMAINDER OF THE COMMAND LINE FOR CONTROL INFORMATION:
       64
65
       66
                                                                            START ADDRESS ONLY: REPEAT PROMPT FOR EACH MEMORY LOCATION FROM THE START ADDRESS FORWARD: NB. END OF MEMORY (AS DETECTED BY THE MMAIN SURROUTINE PDATA) OR A < CR > RESPONSE TO THE PROMPT.
       67
68
       69
77
77
77
77
77
77
77
77
                                                                            WILL TERMINATE THE LOAD.

SP>PR QX 0

START ADDRESS, LOOP INDICATOR, LOOP ON THE LOADING OF
                                                                            THIS ONE MEMORY LOCATION ONLY.
                                                                                                                                                                <sup>3,2</sup>3€ , b
                                                                            START ADDRESS, END ADDRESS, NO LOOP.
                                                                            START ADDRESS, END ADDRESS, NO LOOP, ISSUE ONLY ONE (
PROMET AND FILL MEMORY (BETWEEN START AND END ADDRESSES)
                                                                            WITH THIS VALUE.
                                                                                                                                    Marian was a sign of
                                                                            SP>PR·QW·0
                                                                            START ADDRESS, END ADDRESS, LOOP INDICATOR: ISSUE ONLY ONE PROMPT AND LOOP ON THE LOADING OF MEMORY (BETWEEN START AND END ADDRESSES) WITH THIS VALUE.
       80
                                                                            SP>PR:QW:0 7 L:
       82
83
       84
           000074
                       010167
                                   имимими:
                                                            2$:
                                                                        MOV-
                                                                                    R1,RTNPT
                                                                                                                        ;SAVE POINTER
       85
           000100
                                                                        CALL
                                                                                    FIND
                                                                                                                        LOCATE START ADDRESS IN COMMAND LINE
       86
           000104
                       103004
                                                                        BCC -
                                                                                    3$
       87
           000106
                                                                                    ERR4
                                                                                                                        : MISSING OPERAND
                                                                        CALL
       88
           000112
                       000167
                                   000544
                                                                        JMP
                                                                                    PR5X
                                                                                                                        :FXIT
                                                                                                                                                      1
       89
           000116
                                                                                                                        CONVERT COMMAND LINE VALUE TO BINARY.
                                                            34:
                                                                        CALL
                                                                                    PACK
       90
91
           000122
                       103004
                                                                                                                        CONVERSION SUCCESSFUL : INVALID NUMERIC VALUE
                                                                        BCC -
                                                                                    4$
           000124
                                                                                    ERR5
                                                                        CALL
           000130
                       000167
                                   000526
                                                                                    PR5X
       93
       94
           000134
                       016767
                                   000000G 000000G 4$:
                                                                        MOV-
                                                                                                                        :SAVE LOADING START ADDRESS
:SAVE IT TWICE (FOR REFRESH ON LOOP)
:INIT END ADDRESS
                                                                                    BINWD, MSTRT
       95
           000142
                       016767
                                   000000G 000000G
                                                                        MOV
                                                                                    BINWD, MSTR2
      96
97
98
           000150
                       012767
                                                                        MOV-
                                                                                    #-1,MEND.
                                                                       START ADDRESS HAS BEEN FOUND: SCAN FOR END ADDRESS OR LOOP INDICATOR (CONDITIONS 2, 3 ABOVE) -- IF THERE IS NOTHING FURTHER IN THE COMMAND LINE, CONDITION 1 IS IN EFFECT.
       99
      100
      101
      102-000156
                                                                        CALL .
                                                                                   FIND
                                                                                                                        :SCAN - COMMAND - LINE
           000162
                       103004
                                                                        BCC
                                                                                                                        SOMETHING THERE:
SET:END:ADDR:=:START:ADDR:JUMP:TO:RTN:
      104 000164
                       016767
                                   000000G · 000000G
                                                                        MOV
                                                                                    MSTRT, MEND
      105
           000172
                       000445
                                                                                    9$
      106
      107
           000174
                                                                                                                        000114
                                                                        CMPB
                                                                                    #*L,(R1)
          000200
000202
      108
                       001011
                                                                        BHE -
                                                                                    6$
      109
                       952767
                                   000000G · 000000G
                                                                                    #OUT,BASE
                                                                        BIS
                                                                                                                        SET-FLAG-FOR-OUTPUT CONTROL-
SET-END-ADDR- START-ADDR-
HOW-TO-STOP-LOOP-
      110
           000210
                       016767
                                   000000G 000000G
                                                                        MOV.
                                                                                    MSTRT, MEND
     111
           000216
                                                                        CALL
                                                                                    HANG
     112-000222-
113
                       000431
                                                                                    9$
                                                                                                                        :JUMP - TO - RTH -
     114 000224
```

Approved For Release 2005/07/12 : CIA-RDP85-0957748000200020001-30DRESS

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MACRO M1110 27-MAR-80 15:33 PAGE 5-2
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SPPR-
    115 000230
                  103004
                                                        BCC ----
                                                                 7$
                                                                                             ;OK, CONTINUE
    116
         000232
                                                       CALL:
                                                                 ERR5
                                                                                             : INVALID NUMERIC
    117
         000236
                  000167
                           000420
                                                        . PMT.
                                                                 PR5X
                                                                                             ;EXIT.
    118
    119
                                                       SAVE-END-ADDRESS-(BINARY)
CHECK-FOR-LOOP-INDICATOR-AFTER-END-ADDRESS (CONDITION-4)
    120
    121
    122
         888242
                  016767
                           000000G 000000G 7$:
                                                        MOV.
                                                                 BIHWD, MEND.
                                                                                             :SET-UP END ADDRESS
    123
         000250
                                                        CALL
                                                                 FIND
                                                                                             CHECK FOR LOOP INDICATOR
    124 000254
125 000256
                  103414
                                                       BCS -
                                                                9$
#*L,(R1)
                                                                                             : NO LOOP
                  122711
001404
                           000114
                                                        CMPB
                                                                                             :CORRECT INDICATOR
    126
         000262
                                                       BEQ.
                                                                 8$
                                                                                            ;YES, CONTINUE:
;LOOP.OPTION.ERROR
    127
         000264
                                                       CALL
                                                                 ERR11
                           000366
    128
         000270
                  000167
                                                       IMP.
                                                                PR5X
    129
         000274
    130
         000274
                  052767
                           000000G · 000000G
                                                       BIS
                                                                 #OUT, HANG
                                                                                             ;SET-OUTPUT-CONTROL
    131
         000302
                                                       CALL
                                                                                             ;HOW-TO-STOP-LOOP
    132
    133 000306
                  016701
                           000000G
                                              9$:
                                                       MOV.
                                                                RTHPT.R1
                                                                                            ;POINT.TO.ROUTINE;
;JUMP.TO.ROUTINE.
    134 000312 000171
                           000000
                                                       JMP
                                                                @(R1)
    135
    136
137
                                                       PRINT-QEX-MEMORY-
    138
    139
         000316
                  012767
                           000004
                                   000000G PR50X::
                                                                 #S$QX,CODE
                                                       MOV
                                                                                            SET MEMORY SELECT CODE OF CONTROL
    148
         000324
                  000420
                                                                PR5Q
    141
    142
                                                       PRINT-SDLB-PAGE-MEMORY
                                                                                                               -கூடி - கூடி
    143
    144
         000326
                  012767
                                   000000G PR5QB::
                                                                 #S$QB,CODE
                           000005
                                                                                             SET MEMORY SELECT CODE = SDLB PAGE
     i 45
         000334
                  000414
                                                                PR5Q
    146
    147
                                                       PRINT-QLB-REFERENCE-PAGE
    148
    149
         000336
                                              PR5QR::
    150
         000336
                  012767
                           000006 000000G
                                                       MOV
                                                                #S$QR,CODE
                                                                                            :SET-MEMORY-SELECT-CODE-=-REFERENCE-PAGE
    i5i
         000344
                  000410
                                                                PR5Q
    152
    153
154
                                                       PRINT SUBREAD MEMORY
    155
         000346
                                              PR5SR::
    156
         000346
                           000007 000000G
                  012767
                                                       MOV:
                                                                 #S$SR,CODE.
                  016746
016746
    157
         000354
                           000000G ·
                                                                SRHIGH,-(SP)
SRLOW,-(SP)
                                                       MOV.
                                                                                            :SUPPLY-UPPER-MEMORY LIMIT-
    158
        000360
                           000000G
                                                       MOV
                                                                                            :LOWER · LIMIT ·
                                                                                                                                       159
         000364
                  000404
                                                                PR5GO.
                                                                                                                                      , Y.
                                                                                                                                        44
    160
        000366
                                              PR50:
                                                                                                                                      Ż
    16 i
        000366
                  016746
                           000000G
                                                       MOV.
                                                                SQHIGH,-(SP)
                                                                                            SUPPLY UPPER MEMORY LIMIT.
    162.000372
163 000376
                  016746
                           000000G
                                                       MOV.
                                                                SQLOW,-(SP)
                                                                                             ;LOWER.LIMIT
                                              PR5G0:
        000376
                                                       CALL
                                                                BUFSET.
                                                                                            ;PREPARE FOR PRINT
;OK, CONTINUE
;ERROR, EXIT
                  103002
    165
        000402
                                                       BCC:
                                                                 1$
    166
        000404
                  000167
                           000252
                                                       JMP
                                                                PR5X
    167
    168 000410
                                              1$:
                                                                         READ 16 BIT MEMORY

GET ITS VALUE

CIA-RDP85-00514R000200020001-3
    169 000410
                                                       CALL
                                                                RD5M1
        000414
    170
                  016767 000000G.000000G.
                                                       MOV.
                                                                DATA4, DATA1
        000422
                                                       CALL
                                      Approved For Release 2005/07/1
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0 M1110 27-MAR-80 15:33 PAGE 5-3 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

SPPR-

172 173 000426 174 000434 175 000442 176 000444 177 000452 178 000454 179 000466 180 000466 066767 026767 101762 032767 #BUMP-ADDRESS:
#HAS-UPPER MEMORY-LIMIT-BEEN-REACHED:
#NO, CONTINUE:
#LOOP-ON-000000G - 000000G -ADD. INCVAL,MSTR2 CMP BLOS BIT 000000G - 000000G -MSTR2, MEND. 1\$ #LOOP,BASE 000000G - 0000000G 032767 001002 000167 016767 000750 BHE: JMP: MOV: 8\$ PR5X :YES, CONTINUE. 000202 000000G 000000G 8**\$**: MSTRT, MSTR2 :REINITIALIZE - ADDRESS

SPPR- MACRO M1110 27-MAR-80 15:33 Proved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3

```
PRINT-SIDMEM (MULTIPLE PAGES)
183
184 999479
                                                                                          PR551::
185
        000470
                             012767
                                                  คลลลาล
                                                                     000000G
                                                                                                              MOV
                                                                                                                                   #S$S1.CODE.
                                                                                                                                                                                              ;SELECT-SIDMEM-1
                             000403
                                                                                                              BR
                                                                                                                                  PR5S
187
        000500
188
         000500
                             012767
                                                  000014
                                                                     000000G
                                                                                                              MOV-
                                                                                                                                   #S$S2,CODE.
                                                                                                                                                                                              :SELECT-SIDMEM-2-
189
         000506
                                                                                          PRSS:
190
         000506
                             016746
                                                  000000G
                                                                                                              MOV-
                                                                                                                                  SDHIGH,-(SP)
                                                                                                                                                                                               :SUPPLY-UPPER-MEMORY LIMIT
191
         000512
                             016746
                                                  000000G
                                                                                                              MOV.
                                                                                                                                  SDLOW, -(SP)
                                                                                                                                                                                              ¿LOWER LIMIT

¿PREPARE FOR READ

¿OK, CONTINUE
192 000516
                                                                                                              CALL
                                                                                                                                   BUFS3
193
         000522
                              103002
                                                                                                             BCC.
JMP.
                                                                                                                                   1$
         000524
                              000167
                                                  000132
                                                                                                                                  PR5X
                                                                                                                                                                                               :ERROR, EXIT
195
196
         000530
                                                                                          1$:
          000530
197
                                                                                                              SAVE
                                                                                                                                  CODE
198
          000534
                                                                                                              CALL
                                                                                                                                  RD5M1
                                                                                                                                                                                               :READ · MEMORY · WORD · A ·
 199
          000540
                              016767
                                                  000000G - 000000G -
                                                                                                                                                                                              MOV-
                                                                                                                                  DATA4.DATA1
200
         000546
                              005267
                                                  000000G
201
          000552
                                                                                                              CALL
                                                                                                                                   RD5M1
202
          000556
                              016767
                                                  000000G · 000000G ·
                                                                                                              MCV.
                                                                                                                                                                                              SAVE FOR PRINTING SELECT WORD C SAVE FOR PRINTING SAVE FOR PRINTIN
                                                                                                                                  DATA4, DATA2
203
         000564
                              005267
                                                  000000G
                                                                                                               INC
                                                                                                                                  CODE
294
         000570
                                                                                                               CALL
                                                                                                                                   RD5M1
205
          000574
                              016767
                                                  000000G - 000000G -
                                                                                                              MOV:
                                                                                                                                  DATA4.DATA3
206
         000602
                                                                                                              RESTOR
                                                                                                                                  CODE
297
208
          000606
                                                                                                                                  PRDATA:
                                                                                                              GA. L
                                                                                                                                                                                               :PRINT · MEMORY · CONTENTS
209
         000612
                              103002
                                                                                                              BCC.
                                                                                                                                   20$
                                                                                                                                                                                              :NOT · END · OF · MEMORY · :END · OF · MEMORY ·
210
         000614
                              000167
                                                  000042
                                                                                                               JMP .
                                                                                                                                   PR5X
211
212 000620
213
         000620
                              066767
                                                  000000G-000000G-
                                                                                                               ADD
                                                                                                                                                                                               :BUMP ADDRESS
                                                                                                                                   INCVAL, MSTR2
214
         000626
                              026767
101735
                                                  000000G-000000G
                                                                                                              CMP -
                                                                                                                                   MSTR2,MEND
                                                                                                                                                                                               :HAS UPPER MEMORY LIMIT BEEN REACHED
215
         000634
                                                                                                              BLOS
                                                                                                                                   1$
                                                                                                                                                                                               :NO, CONTINUE.
          000636
                              032767
                                                  000000G · 000000G
                                                                                                               BIT.
                                                                                                                                   #LOOP, BASE
                                                                                                                                                                                              ;LOOP.ON.
;YES, CONTINUE
217
         000644
                              001002
                                                                                                                                   8$
218
         000646
                                                  000010
                              000167
                                                                                                               JMP
                                                                                                                                   PR5X
219
         000652
                                                                                                                                                                                               :REINITIALIZE · ADDRESS
                              016767
                                                  000000G-000000G-8$:
                                                                                                              MOV-
                                                                                                                                  MSTRT, MSTR2
220
         000660
                              000723
                                                                                                                                   135
221
222
223
         000662
                                                                                          PR5X:
224
         000662
                                                  000000
                                                                                                                                  #Ś$CLR,−(SP)
                              012746
                                                                                                              MOV.
                                                                                                                                                                                              :CLEAR·SP·
:WRITE·TO·CONTROL·REG·
225 000666
                                                                                                               CALL
                                                                                                                                   SPCR
226
         000672
                              042767
                                                  000000C-000000G
                                                                                                              BIC.
                                                                                                                                   #<ONCE+OUT>,BASE
                                                                                                                                                                                               :CLEAR · PROMPT · FLAG ·
          000700
                                                                                                               CALL
                                                                                                                                   KILL
                                                                                                                                  SPSXX
228 000704
                              000167
                                                  000000G
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A STATE OF THE STA 0 M1110 27-MAR-80 15:33 PAGE 7 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3 SPPR-230 231 232 233 000710 234 000710 235 000714 236 000720 237 000724 238 000736 239 000734 240 000744 241 000750 243 244 PRINT-SINGLE WORD-MEMORY-: RD5M1: :ADDRESS SELECT: :SEND:TO:SP:CONTROL:REG:T:: :ACTUAL:ADDRESS: :SEND:TO:SP: 012746 000001 MOV #S\$LA,-(SP) CALL SPCR MOV. CALL: MOV: 016746 000000G MSTR2,-(SP) LBSP 016746 000000G CODE,-(SP) ; SELECT: MEMORY: CALL CALL: SPLB :DO-SP-TO-LOD-BUS 012667 000000G (SP)+,DATA4 :FETCH:DATA RETURN.

.END.

000001

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MACRO M1110 27-MAR-80 15:33 PAGE 7-1
CARLE Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
 SYMBOL . TABLE
  ALUCKE=-040000
                                                  BYTE39= 000047
                                                                                                   BYTE90= 000132
                                                                                                                                                   MMADRD=.000100
MMLEFT=.000002.
MMOE. =.000004
                                                                                                                                                                                                    Q$ICP. = . ФОРОВЬ
 ALU0E - = - 004000
                                                  BYTE4 = 000004
                                                                                                  BYTE91 = 000133
BYTE92 = 000134
                                                                                                                                                                                                    Q$IHB -- 000003
           = · 010000
= · ****** GX ·
 AR1
                                                  BYTE40= 000050
                                                                                                                                                                                                    Q$IHRL= 000002
 BASE -
                                                  BYTE41 = . 000051
                                                                                                   BYTE93= 000135
                                                                                                                                                   MMURTE=-000010
 BINUD : ****** GX
                                                                                                                                                                                                    Q$IMRP=.000007
                                                  BYTE42 = . 000052
                                                                                                   BYTE94= 000136
                                                                                                                                                   MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
                                                                                                                                                                                                    Q$LBD = 001000
 BITVAL = 000000
BIT0 = 000001
                                                  BYTE43= 0000053
                                                                                                  BYTE95= 000137
BYTE96= 000140
                                                                                                                                                                                                    Q$LBDP=-001001
                                                  BYTE44= 000054
 BITI
             = 0000002
                                                                                                                                                                                                    Q$LBP - - 000001
                                                 BYTE45= 000055
BYTE46= 000056
                                                                                                  BYTE97=-000141
                                                                                                                                                   MSTRT = ******* GX
                                                                                                                                                                                                   Q$LDCD= 000003
Q$LDMD= 000004
 BITIO
            = 002000
                                                                                                  BYTE98= 000142
                                                                                                                                                  MSTR2 -- *******
MSYN -- 000040
 BITii
            = 004006
                                                  BYTE47= 000057
                                                                                                  BYTE99= 000143
BYTVAL= 000144
CBKALL= 001000
                                                                                                                                                                                                    Q$LDPP= 002000
 BIT12 - 010000
                                                  BYTE48= 000060
                                                                                                                                                               = 000144
                                                                                                                                                                                                   Q$LHP -= 010000
Q$MNC -= 140000
Q$MR = 000052
Q$MRP -= 000040
            = 020000
 BIT13
                                                 BYTE49= 000061
BYTE5 = 000005
             = · 040000
= · 100000
                                                                                                                                                   ONCE -
 BIT14
                                                                                                  CBKCLK = . 000400
                                                                                                                                                               X9 ****** = XX
                                                                                                                                                   DHT.
 BIT15
                                                  BYTE50= 000062
                                                                                                  CHOBRE = 100000
                                                                                                                                                   PACK -
             = 000004
 BIT2.
                                                  BYTE51 = . 000063
                                                                                                  CODE - = - ********* GX-
                                                                                                                                                               = -000010
                                                                                                                                                                                                   Q$MRP2= 000240
Q$MSC = 040000
                                                                                                                                                   PLB -
              - 000010
 BIT3
                                                  BYTE52= 000064
                                                                                                  CPCCEN= 010000
                                                                                                                                                  PLC:
                                                                                                                                                               - 000020
 BIT4
              - 000020
                                                  BYTE53= 0000065
                                                                                                  CPREAD = 040000
                                                                                                                                                  PLD
                                                                                                                                                               = .000030
                                                                                                                                                                                                   Q$MSET= 000004
              = . 000040
 BIT5
                                                 BYTE54= 000066
                                                                                                  CPWRTE = 020000
CSADRD = 000004
                                                                                                                                                   PLRUR - = - 000200
                                                                                                                                                                                                   Q$MSP = 100000
 BIT6
              = 000100
                                                                                                                                                                                                 USPP = 000100

USPPSU= 000320

USPPSU= 200320

USPP2 = 200320

USPP2 = 200320

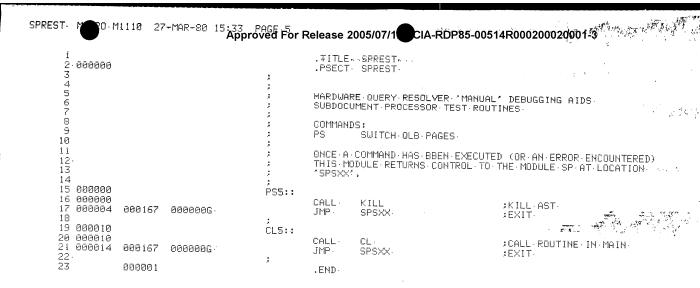
USULT = 0000320

USULT = 000053
                                                  BYTE55= 000067
                                                                                                                                                   PLR.EN= 000200
                000200
                                                                                                  CSHURU= 000004
CSEQCI= 100000
CSOE = 000040
CSWRTE= 000100
DATA1 = ******** GX
 BIT7
                                                  BYTE56 = . 000076
                                                                                                                                                  PRDATA= ****** GX
 BITS.
                000400
                                                  BYTE57= 000071
                                                                                                                                                  PR5GO.
                                                                                                                                                                  000376R
 BIT9
             = 001000
                                                  BYTE58= 000072
                                                                                                                                                   PR5LN =
                                                                                                                                                                  000030 G
 BUFSET= · ****** GX ·
                                                 BYTE59= .000073
                                                                                                                                                  PR5Q
                                                                                                                                                                   000366R
                                                                                                                                                                                           092
 BUFS3 = ****** GX
                                                 BYTE6 = 000006
                                                                                                  DATA2⋅=⋅****** GX-
                                                                                                                                                  PR5QB
                                                                                                                                                                                           002
                                                                                                                                                                   000326RG
 BYTE0 = 000000
                                                 BYTE60= 000074
                                                                                                  PRSOR
                                                                                                                                                                   000336RG
 BYTE: - 0000001
                                                  BYTE61= 000075
                                                                                                                                                  PR5QX
                                                                                                                                                                                           002.0$0LB.=.000054...
002.0$0LR.=.000001
002.0$0W.=.000042...
                                                                                                                                                                   000316RG
 BYTE10= 000012
                                                 BYTE62= 000076
                                                                                                                                                   PR5S
                                                                                                                                                                   000506R
 BYTE11= 000013
                                                 BYTE63= 000077
                                                                                                                                                  PR5SR
                                                                                                                                                                   000346RG
                                                 BYTE64= 000100
                                                                                                  DB$SPT= 000026
                                                                                                                                                  PR5S1
                                                                                                                                                                  000470RG
                                                                                                                                                                                                   Q$RDCD= 000005
BYTE13= 000015
BYTE14= 000016
                                                 BYTE65= 000101
                                                                                                  DB$TPC=-000023
DISPGS=-100000
                                                                                                                                                  PR552
                                                                                                                                                                  000500RG
                                                                                                                                                                                           002
                                                                                                                                                                                                   Q$RDMD= . 000006
                                                  BYTE66≐ 000102
                                                                                                                                                   PR5TBL
                                                                                                                                                                  000000RG
                                                                                                                                                                                                  Q$REBK = 001000
Q$RNC = 006000
Q$RSC = 004000
 BYTE15= 000017
                                                                                                                                                                                           002
                                                 BYTE67=-000103
                                                                                                  DMAAWR= 000005
                                                                                                                                                  PR5X-
                                                                                                                                                                   000662R
 BYTE16= 000020
                                                 BYTE68= 000104
                                                                                                  DMARRD= 000003
                                                                                                                                                  QR$CR1=:176420
 BYTE17= 000021
                                                 BYTE69=-000105
                                                                                                  DMARWR= 000004
                                                                                                                                                  QR$CR2= 176422
                                                                                                                                                                                                   Q$RSET= 000010
 BYTE18= 000022
                                                 BYTE7 = 000007
                                                                                                  ENBR: =:010000
ERR:1 =:****** GX:
ERR4 =:*****
                                                                                                                                                  QR$LBR= 176424
                                                                                                                                                                                                   Q$SM = 100000
Q$SP = 000120
 BYTE19= 000023
                                                 BYTE70= 000106
                                                                                                                                                  Q$ATTN= 000100
 BYTE2 - 000002
                                                 BYTE71=:000107
BYTE72=:000110
                                                                                                                                                                                                  U$SP2 = 000340
RD5M1 000710R
                                                                                                                                                  Q$BCL · = · 000001
Q$CCCP = · 000040
 BYTE20=-000024
                                                                                                  ERR5
ERR7
                                                                                                             = · ***** GX
BYTE21= 000025
BYTE22= 000026
                                                 BYTE73= 000111
                                                                                                  ERR7 = ********* GX**
FIND = ******** GX**
HANG = ********* GX**
                                                                                                                                                                                                                                           002
                                                                                                                                                  Q$CHB - - 000400
                                                                                                                                                                                                   RGQ.EN= 000200
                                                 BYTE74= 000112
                                                                                                                                                  Q$CHRL= 000200
                                                                                                                                                                                                  RGQ.VA= 020000;
RTNPT = ******** GX-
SCAN = ******* GX-
 BYTE23=-000027
                                                 BYTE75= 000113
                                                                                                                                                  Q$CLR·=·000040
Q$CNC·=·030000
Q$CP·=·000060
 BYTE24= 0000030
                                                                                                 INCVAL = ******** GX:
KILL = ******* GX:
LBSP = ******* GX:
                                                 BYTE76= 000114
 BYTE25= 000031
                                                 BYTE77= 000115
 BYTE26= 000032
                                                                                                                                                                                                   SDHIGH= ****** GX
                                                 BYTE78= .000116
                                                                                                                                                  Q$CPCC= 000010
                                                 BYTE79= 000117
BYTE8 = 000010
                                                                                                                                                                                                   SDLOW = ****** GX.
SEQ.CI = *000010
 BYTE27= 000033
                                                                                                  LOC.EN= 000100
                                                                                                                                                  Q$CP2·=·000260
Q$CSC·=·010000
 BYTE28= 000034
                                                                                                 LOC.WA = 040000
LOC.WB = 100000
LOCP = *********** GX
MAREN1 = 000001
                                                                                                                                                                                                  SEU.CI = 000010
SPCR = ******** GX
SPLB = ********* GX
SPPR5 000030RG 0
SPSXX = ********** GX
 BYTE29= 0000035
                                                 BYTE80--000120
                                                                                                                                                  Q$CSEL = 000360
Q$CSET = 000002
Q$CSP = 020000
BYTE3 = 000003
                                                 BYTE01= 000121
 BYTE30= 000036
                                                 BYTE82= 000122
                                                                                                                                                                                                                                           002.
BYTE31= 000037
BYTE32= 000040
                                                 BYTE83= 000123
                                                                                                 MAREN2= 004000
MARLOD= 010000
MAROUT= 000002
                                                                                                                                                  Q$DMA - = 000001
                                                                                                                                                                                                   SQHIGH= ***** GX
                                                 BYTE84= 000124
                                                                                                                                                  Q$ENBK = . 040000
BYTE33= 000041
                                                                                                                                                                                                   SQLOW = ****** GX.
                                                 BYTE85= 000125
                                                                                                                                                  Q$ENOP= 020000
                                                                                                                                                                                                   SRHIGH= ******** GX*
SRLOW = ******** GX*
 BYTE34= 000042
                                                 BYTE86= . 000126
                                                                                                  MAR.LO= 002000
                                                                                                                                                  Q$FAL -- 004000
BYTE35= 0000043
                                                 BYTE87 = 000127
                                                                                                 MAR.OU= 000040
MBKALL= 001000
                                                                                                                                                  Q$FC.
                                                                                                                                                                                               SECR TOROGRAPHY TO SERVICE VALUE OF THE SECRETARY OF THE 
BYTE36= 000044
                                                                                                                                                                 000045
                                                BYTE88= 000130
                                                                                                                                                  Q$F0
                                                                                                                                                                  000044
BYTE37= 000045
                                                BYTER9= RAR131
                                                                                                 MBKCLK = . 000400
                                                                                                                                                                                                             = · 0000005
= · 0000006
                                                                                                                                                  Q$FP
                                                                                                                                                             = 000046
                                                                                                                                                                                                   S$QB
BYTE38= : 000046
                                                BYTE9 = 000011
                                                                                                                                  X Q$HBF = 000045 S$QR

CIA-RDP85-00514R000200020001-3
                                                                                                 MEND.
                                                                     Approved For Release 2005/07/1
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0 M1110 27-MAR-80 15:33 PAGE 7-2:
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
 SPPR-
SYMBOL TA
S$QX- = 0000004
                                          T$IB
                                                   = 0000026
                                                                                   WORD15=-000036
WORD16=-000040
WORD17=-000042
                                                                                                                            WORD44=-000130
                                                                                                                                                                     WORD73=-000222
WORD74=-000224
WORD75=-000226
 S$SR∙ = 0000007
                                          T$IBAR=∙000024
                                                                                                                            WORD45= 000132
         = - ผิดิติดี 1 ผิ
                                          T$IBE - - 020000
T$IBF - - 040000
S$S1
                                                                                                                            WORD46= 000134
WORD47= 000136
          = 0000014
S$S2
                                                                                   WORD18= 000044
WORD19= 000046
WORD2 = 000004
                                                                                                                                                                     WORD76= 000230
WORD77= 000232
TD$CTR= 176370
TD$CTW= 176360
TD$INL= 004000
                                          T$ICD - = -000040
                                                                                                                            WORD48= 000140
                                          T$MODE=:004000
                                                                                                                                                                     WURDY7=-000234
WURD78=-000236
WURD79=-000236
WURD8=-00020
WURD80=-000240
WURD81=-000242
                                                                                                                            WORD49= 000142
WORD5 = 000012
                                          T$OB∙ =∙000036
                                                                                   WORD20= 000050
 TD$MEM= 000270
                                          T$08E · = · 004000
                                                                                   WORD21= 000052
                                                                                                                            WORD50= 000144
TD$0AR= 176344
TD$0TR= 176346
                                          T$OBF·=·010000
                                                                                   WORD22 = 000054
WORD23 = 000056
                                                                                                                            WORD51= 000146
                                          T$0BRA= 000034
                                                                                                                            WORD52=-000150
TD$QRD=.000274
TD$SW-=.176376
                                          T$0BWA=-000032
T$0UTA=-100000
                                                                                   WORD24= 000060
                                                                                                                            WORD53= 000152
WORD54= 000154
                                                                                                                                                                     WORD82= 000244
WORD83= 000246
WORD84= 000250
                                                                                   WORD25 - 000062
WORD26 - 000064
                                          T$RBD0--000200
T$RBB--000040
T$RSET--040000
T$SC--000022
T$SCLK-020000
 TD$TAR= · 176372
                                                                                                                           WORD54= 000156
WORD55= 000156
WORD56= 000160
WORD57= 000162
WORD59= 000164
WORD59= 000166
WORD6= 000014
 TD$TAW= 176362
                                                                                   WORD27= 000066
                                                                                                                                                                     WORD85= 000252
WORD86= 000254
WORD87= 000256
 TD$TDR= · 176374
                                                                                   WORD28=-000070
WORD29=-000072
 TD$TDW=:176364
T$AD· = 0000020
T$BA· = 000002
                                                                                   WORD3 = 000006
                                          T$SEG1=-000000
T$SEG2=-000001
                                                                                                                                                                     WORD88= 000260
                                                                                   WORD30= 0000074
WORD31= 000076
WORD32= 000100
                                                                                                                                                                     WORD89 - 000262
WORD9 - 000022
T$BD· = 0000010
T$BSO·= 100000
                                                                                                                            WORD60=.000170
                                          T$SEG3=-000002
                                                                                                                            WORD61=-000172
WORD62=-000174
                                                                                                                                                                      WORD90= 000264
 T$BT· = 000020
                                          T$SO· = 0000001
T$UBUS= 100000
                                                                                   WORD33=-000102
                                                                                                                                                                     WORD91=-000266
WORD92=-000270
WORD93=-000272
 T$BTAR= 000030
                                                                                   WORD34= 000104
WORD35= 000106
                                                                                                                            WORD63= 000176
T$BTD - = 002000
T$CD - = 000100
                                          T$iCLK≕.000400
                                                                                                                           WORD64= 000200
WORD65= 000202
WORD66= 000204
                                         T$8BEN = 000020
UBD:IN = 000020
WORD0 = 000000
WORD1 = 000002
                                                                                   WORD36= 000110
                                                                                                                                                                     WORD94= 000274
 T$CLK·=·002000
                                                                                   WORD37= 000112
                                                                                                                                                                     WORD95= 000276
WORD96= 000300
WORD97= 000302
 T$DISK=.000200
                                                                                   WORD38=-000114
WORD39=-000116
                                                                                                                            WORD67= 000206
T$DRD · = · 000004
                                                                                                                            WORD68=-000210
T$EMEM= 010000
                                          WORD10= 000024
                                                                                   WORD4 = 000010
                                                                                                                           WORD69= 000212
WORD7 = 000016
                                                                                                                                                                     WORD98= 000304
T$FSAA= 000000
                                         WORD11= 000026
WORD12= 000030
                                                                                   WORD40=-000120
                                                                                                                                                                     WORD99= 000306
T$FSAB= 000004
                                                                                   WORD41= 000122
WORD42= 000124
WORD43= 000126
                                                                                                                            WORD70= 0000214
                                                                                                                                                                     WRDVAL=-000310
T$FSAC=-000014
                                          WORD13=.000032
                                                                                                                            WORD71= 000216
                                                                                                                                                                     XTREAD= 001000
T$F$B2=-000010
                                         WORD14= 0000034
                                                                                                                            WORD72= 000220
                                                                                                                                                                     XTWRTE = . 000400
 . ABS.
                                 000
             000000
SPPR
                                002
ERRORS DETECTED:
VIRTUAL MEMORY USED: 3411 WORDS ( 14 PAGES)
DYNAMIC MEMORY: 4916 WORDS ( 18 PAGES)
ELAPSED TIME: 00:00:46
pPPR.SPPR/-SP=[20.1]IM.[20.1]SPPR
```

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SPREST MACRO M1110 27+MAR+80 15:33 PAGE 5+1
SYMBOL TABLE Approved For Release 2005/07/12: CIA-RDP85-00514R000200020001-3
ALUCKE = · 040000
                                BYTE42= 000052
                                                                 BYTE94=-000136
                                                                                                                                        = 100000
= 000120
ALU0E - 004000
A01 = 010000
                                                                                                QR$LBR=-176424
                                BYTE43 = . 000053
                                                                BYTE95= 000137
BYTE96= 000140
                                                                                                Q$ATTN= 000100
                                                                                                                                 Q$SP
                                BYTE44= 000054
                                                                                                Q$BCL - - 000001
Q$CCCP - 000040
                                                                                                                                 Q$SP2 - 000340
BITVAL = 000000
                                                                BYTE97= 000141
                                BYTE45= 000055
SIT0 = 000001
SIT1 = 000002
                                                                                                                                 RGQ:EN= 000200
                                BYTE46=-000056
                                                                BYTE98= 000142
                                                                                                Q$CHB - = .000400
                                                                                                                                 RGQ.VA= 020000
                                BYTE47 = . 000057
                                                                BYTE99= 000143
                                                                                                Q$CHRL= 000200
                                                                                                                                 SEQ.CI= 000010
SPSXX = ******* GX
                                                                BYTVAL = 000143
                                BYTE48= 000060
                                                                                                Q$CLR - = 000040
BIT11 = 004000
                                BYTE49= 000061
                                                                 CBKALL= 001000
                                                                                                Q$CNC - 030000
Q$CP - 000060
                                                                                                                                 S$CLR -=
                                                                                                                                           000000
BIT12 - 010000
                                BYTE5 = 000005
                                                                 CBKCLK=-000400
                                                                                                                                 Š$LA
                                                                                                                                       = 0000001
= 000005
BIT13
       = 020000
                                BYTE50 = . 000062
                                                                CL
                                                                        = · ******** GX
                                                                                                Q$CPCC= 000010
                                                                                                                                 S$OB
BIT14 = 040000
BIT15 = 100000
                                BYTE51 = · 000063
                                                                 ČĽ5
                                                                           000010RG
                                                                                           002 · Q$CP2 · = · 000260
Q$CSC · = · 010000
                                                                                                                                        = .000006
                                BYTE52=-000064
                                                                 CNOBRE = · 100000
                                                                                                                                        = 000004
= 000007
                                                                                                                                 S$QX
BIT2.
        = 000004
                                BYTE53= 000065
                                                                 CPCCEN=-010000
                                                                                                Q$CSEL = . 000360
                                                                                                                                 SESE
BIT3
        = 000010
                                BYTE54= 0000066
                                                                CPREAD = : 040000
                                                                                                Q$CSET=-000002
                                                                                                                                 S$S1
                                                                                                                                        = 000010
BIT4
        = 0000020
                                BYTE55= 000067
                                                                CPWRTE = : 020000
                                                                                                Q$CSP - = - 020000
Q$DMA - = - 000001
                                                                                                                                 S$S2
                                                                                                                                           000014
        = . 000040
BIT5
                                BYTE56 = 000070
BYTE57 = 000071
                                                                 CSADRD= 000004
                                                                                                                                 TD$CTR=-176370
        = 000100
BIT6
                                                                CSEQCI = 100000
CSOE - = 000040
                                                                                                Q$ENBK = . 040000
                                                                                                                                 TD$CTW= 176360
TD$INL= 004000
BIT7
                                BYTE58 = . 000072
                                                                                                Q$ENOP = . 020000
                                                                                                                                 TD$INL=-004000
TD$MEM=-000270
BIT8.
        = 000400
                                BYTE59= 000073
                                                                CSWRTE = . 000100
                                                                                                Q$FAL - = -004000
                                                                                                                                 TD$MEM= 000270 TD$0AR = 176344 TD$0TR = 176346 TD$0RD = 0002721 TD$SW = 176376
                                                                DBR,RD=-000001
DB$CPP=-001457
DB$SPT=-000026
BIT9
        - 001000
                                BYTE6 - 000006
                                                                                                Q$FC = 000045
Q$FO = 000044
BYTEØ
        = 000000
                                BYTE60= 0000074
BYTE! = 000001
                                BYTE61= 000075
                                                                                                Q$FP -
                                                                                                        = . 000046
BYTE10=-000012
                                BYTE62= 000076
                                                                DB$TPC=:000023
                                                                                                Q$HBF - - 000002
                                                                DISPGS= 1000025
DMAAWR= 000005
BYTE11= 000013
                                BYTE63= 000077
                                                                                                Q$ICP -- 000006
                                                                                                                                 TD$TAR= · 176372.
BYTE12= 000014
                                BYTE64= . 000100
                                                                                                Q$IHB - - 000003
                                                                                                                                 TD$TAW= 176362
BYTE13= 000015
                                BYTE65= 000101
                                                                DMARRD = - 000003
                                                                                                Q$IHRL= 000002
                                                                                                                                 TD$TDR=-176374
3YTE14= 000016
8YTE15= 000017
                                BYTE66= 000102
                                                                 DMARWR= 000004
                                                                                                Q$IMRP= 000007
                                                                                                                                 TD$TDW= · 176364
                                                                ENBR: = 010000
KILL: = ******* GX:
LOC:EN=*000100
                                BYTE67=-000103
                                                                                                Q$LBD - = - 001000
                                                                                                                                T$AD = 000020
T$BA = 000002
T$BD = 000010
T$BD = 100000
BYTE16=-000020
                                BYTE68 - . 000104
                                                                                                Q$LBDP=-001001
BYTE17= 000021
BYTE18= 000022
                                BYTE69= 000105
                                                                                                Q$LBP - 000001
                                BYTE7 = 0000007
                                                                LOC.WA- 040000
                                                                                                Q$LDCD=:000003
3YTE19=-000023
                                BYTE70= 000106
                                                                LOC.WB= 100000
MAREN1= 000001
                                                                                                Q$LDMD= 000004
                                                                                                                                 T$BT = 000020
JYTE2.=.000002
                                BYTE71= 000107
                                                                                                Q$LDPP= 002000
                                                                                                                                 T$BTAR= 000030
JYTE20= 000024
                                BYTE72= 000110
                                                                MAREH2 = . 004000
                                                                                                Q$LHP - - 010000
Q$MNC - - 140000
                                                                                                                                 T$BTD - = - 002000
BYTE21= 000025
JYTE22= 000026
                                BYTE73= 000111
                                                                MARLOD= 010000
                                                                                                                                 T$CD = 000100
T$CLK = 002000
                                BYTE74= 000112
                                                                MAROUT = 000002
                                                                                                Q$MR · = · 000052
BYTE23= 000027
                                BYTE75= 000113
                                                                MAR.LO= 002000
MAR.OU= 000040
                                                                                                Q$MRP - = - 000040
                                                                                                                                 T$DISK=.000200
T$DRD.=.000004
BYTE24= 000030
                                BYTE76= 000114
                                                                                                Q$MRP2= 000240
                                BYTE77= 000115
BYTE25= 000031
                                                                MBKALL= 001000
                                                                                                Q$MSC · = · 040000
                                                                                                                                 T$EMEM= -010000
BYTE26= 000032
                                                                                                Q$MSET= 000004
                                BYTE78=-000116
                                                                 MBKCLK= 000400
                                                                                                                                 T$FSAA= 0000000
BYTE27= 0000033
                                BYTE79= 000117
BYTE8 = 000010
                                                                                                0$MSP = 100000
                                                                MMADRD= 000100
                                                                                                                                 T$FSAB= 000004
T$FSAC= 000014
BYTE28= 000034
                                                                MMLEFT= 000002
MMOE = 000004
                                                                                                Q$NCLK= 176000
Q$PP = 000100
BYTE29= 000035
BYTE3 = 000003
                                BYTE80= 000120
                                                                                                                                 T$F$HC= 000014
T$F$B2= 000010
T$IB = 000026
T$IBAR= 0000244
T$TBAR= 040000
T$TBF = 040000
                                                                                                Q$PPSW=-000320
Q$PPS--000320
                                BYTE81= 000121
                                                                 MMWRTE = . 000010
BYTE30= 000036
                                                                MNOBRE = 100000
MREN1 = 000001
MREN2 = 020000
                                BYTE82= . 000122
BYTE31= 000037
                                BYTE83= · 000123
                                                                                                Q$QHLT= 000013
BYTE32= 0000040
                                BYTE84= 000124
                                                                                                Q$QL - 000043
BYTE33= 000041
                                BYTE85=-000125
                                                                 MSYN· = 000040
                                                                                                Q$QLA - = 000043
                                                                                                                                 T$ICD = 000040
BYTE34= 000042
                                BYTE86= 000126
                                                                        = 000144
                                                                                                 Q$QLB·=·000054
                                                                                                                                 T$MODE= 004000
BYTE35= 000043
                                BYTE87= 000127
                                                                       = 000010
                                                                PLB.
                                                                                                Q$QLR - = 000001
Q$QW - 000042
                                                                                                                                 T$0B = 000036
T$0BE = 004000
BYTE36= 000044
BYTE37= 000045
                                BYTE88= 000130
                                                                        = 000020
                                                                 PLC.
                                BYTE89= 000131
                                                                 PLD.
                                                                        = 000030
                                                                                                Q$RDCD= 000005
                                                                                                                                 T$0BF - 010000
BYTE38= 000046
                                BYTE9 = 000011
                                                                 PLRUR - - 000200
                                                                                                Q$RDMD = . 000006
                                                                                                                                 T$OBRA= DARAZA
BYTE39= 000047
                                BYTE90= 000132
                                                                PLR.EN= 000200
                                                                                           0$REBK = 001000 T$400TA = 1000032

002 0$RNC = 006000 T$400TA = 100000

0$RSC = 004000 T$RBDO = 000200
BYTE4 = 000004
                                BYTE91=:000133
                                                                          000000RG
BYTE40= 000050
                                                                QR$CR1= 176420
                                BYTE92= 000134
                                            00135 0R$CR2= 176422. 0$$R$ET= 0000200020001-3 T$RNB = 0000040
BYTE41= 000051
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17. 14 17. 17.

 $g|_{X} f_{i}$

12. 34 6

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27-MAR-80 15:33 PAGE 5-2
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
SPREST- F
T$RSET=:040000
                                      UORD2 - = - 000004
                                                                           WORD40=-000120
                                                                                                                 WORD61=-000172
                                                                                                                                                      WORD82=-000244
WORD83=-000246
T$SC. = 000022
T$SCLK= 02000
                                                                           WORD41= 000122
                                      WORD20=-000050
                                                                                                                 WORD62=.000174
                                      WORD21=-000052
                                                                           WORD42= 000124
                                                                                                                WORD63=-000176
WORD64=-000200
                                                                                                                                                      WORD84=±000250
T$SEG1=-000000
T$SEG2=-000001
                                     WORD22= 000054
WORD23= 000056
                                                                            WORD43= 000126
                                                                                                                                                      WORD85=:000252
                                                                                                                                                      WORD65=:000254
WORD86=:000256
WORD87=:000256
WORD88=:000260
WORD89=:000262
                                                                           WGRD44=-000130
                                                                                                                 WORD65=.000202
T$SEG3=-000002
                                      WORD24= 000060
                                                                           WORD45 = - 000132
                                                                                                                 WORD66= 000204
T$SO· =·000001
                                      WORD25=-000062
                                                                           WORD46=-000134
                                                                                                                 WORD67= 000206
T$UBUS= 100000
                                     WORD26=-000064
WORD27=-000066
                                                                           WORD47= 000136
                                                                                                                 WORD68= 000210
T$1CLK=-000400
                                                                                                                                                     WORD89 = 000262

WORD9 = 000022

WORD91 = 000264

WORD91 = 000266

WORD93 = 000272

WORD93 = 000272

WORD95 = 000274

WORD95 = 000302

WORD97 = 000302
                                                                           WORD48=-000140
                                                                                                                 WORD69= 000212
T$8BEN= 000020
                                      WORD28= 0000070
                                                                           WORD49= 000142
WORD5 = 000012
                                                                                                                 WORD7 = 000016
UBD.IN= 000020
WORD0 = 000000
WORD1 = 000002
                                      WORD29=-000072
                                                                                                                WORD70= 000214
WORD71= 000216
WORD72= 000220
                                      WORD3 = 000006
WORD30= 000074
                                                                           WORD50-000144
                                                                           WORD51=-000146
                                                                           WORD52=-000150
WORD53=-000152
WORD10=-000024
                                      WORD31= 000076
                                                                                                                WORD73=-000222
WORD74=-000224
WORD75=-000226
WORD11= 000026
                                      WORD32= 000100
WORD33= 000102
WORD12= 000030
                                                                           WORD54= 000154
WORD13≕.000032
                                      WORD34= 000104
                                                                                                                WORD75= 000226
WORD76= 000230
WORD77= 000232
WORD78= 000234
WORD79= 000236
                                                                           WORD55= 000156
WORD56= 000160
WORD14= 000034
WORD15= 000036
                                      WORD35=-000106
                                                                                                                                                      WORD98= 000304
                                      WORD36=-000110
WORD37=-000112
                                                                           WORD57=-000162
                                                                                                                                                      WORD99≕ 000306
WORD16= 000040
                                                                           WORD58 - 000164
                                                                                                                                                      WRDVAL = . 000310
XTREAD = . 001000
WORD17= 000042
                                                                           WORD59= 000166
WORD6 = 000014
                                      WORD38= 000114
                                                                                                                WORD8 = 000020
WORD80 = 000240
WORD18= 000044
                                      WORD39=-000116
WORD4 =-000010
                                                                                                                                                      XTURTE = . 000400
WORD19= 000046
                                                                           WORD60- 000170
                                                                                                                 WORD81= 000242
. ABS.
            равава
                             000
001
            000000
SPREST-
            000020
                              002
ERRORS · DETECTED:
VIRTUAL MEMORY USED: 3001 WORDS (+12 PAGES)
DYNAMIC MEMORY: 3860 WORDS: (14 PAGES)
ELAPSED:TIME: 00:00:39
SPREST:SPREST/+SP=[20,1]IM,[20,1]SPREST-
```

```
27-MAR-80 15:34 PAGE 5 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
                                                                 .FITLE. SPSUB....
     000000
  23456789
                                                                 .PSECT SPSUB
                                                    :
                                                                 .MCALL · WTSE$S,CLEF$S
                 000003
                                                    EFN.3
                                                                            3
                                                                HARDWARE QUERY RESOLVER "MANUAL" DEBUGGING AIDS SUBDOCUMENT PROCESSOR SUBROUTINES
 iō
 11
12
13
                                                                DATA: TRANSFER
                                                                LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-SP-BUS
 15
16
17
                                                                2(SP)
                                                                            DATA FOR PRE-SELECTED SP DESTINATION.
18
19
20 000000
21 000000
22 000002
24 000012
24 000022
26 000026
27
28 000032
29 000033
30 000042
31
32 33
 18
                                                    LBSP::
                016667
                            000002
                                        176424
                                                                MOV.
                                                                            2(SP).QR$LBR
                                                                                                                :MOVE DATA TO LOD BUS REG
                012746
                             001001
                                                                                                               CLR-DRIVE AND-PULSE
CLR-SELECTION-BITS-
SET-NO-CLOCKS-
SELECT-SP
                                                                MOV:
                                                                            \# \langle Q$LBD + Q$LBP \rangle, - (SP)
                052716
012746
                             000360
                                                                BIS.
                                                                            #<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                             176000
                                                                MOV
                052716
                             000340
                                                                BIS
                                                                            #Q$SP2,(SP)
                                                                CALL
                                                                                                               ;CLEAR·CP·NO+CLOCK·BITS
;SET·LOD·BUS·DRIVE·
                012746
                             006000
                                                                MOV.
                                                                            #Q$RNC,-(SP)
                012746
                             001000
                                                                MOV.
                                                                            #Q$LBD,−(SP)
                                                                CALL:
                                                                            CSR1
                                                                DE-SELECTION
34
35
36
37
38
39
40
     000046
                012746
                                                                            #<Q$LBD+Q$LBP>,-(SP)
#<Q$CSEL>,(SP)
#<Q$NCLK>,-(SP)
                             001001
                                                                MOV.
                                                                                                                :CLEAR · DRIVE · AND · PULSE
     000052
                052716
                             000360
                                                                BIS.
                                                                                                               CLR SELECTION BITS
SET NO+CLOCKS
     000056
                012746
                             176000
     000062
                                                                CALL
                                                                            CSR4
    000066
000072
                011666
                             000002
                                                                MOV:
                                                                            (SP),2(SP)
                                                                                                               :MOVE RETURN ADDRESS DOWN STACK Y
:POINT TO RETURN ADDRESS
                005726
                                                                TST.
    000074
                                                                RETURN.
```

SPSUB-

D-M1110

SPSUB --- MACRO - M1110 27-MAR-80 15:34 PAGE For Release 2005/07/12: CIA-RDP85-00514R000200020001-3

```
43
44
45
                                                         DATA · TRANSFER
46
47
48
49
50
51
52
53
54
55
                                                         LOD-BUS-REGISTER-TO-A-DESTINATION-ON-THE-SP-BUS-
                                                         SINGLE CLOCK SEQUENCER ONLY
                                                         INPUT:
                                                         2(SP)
                                                                    DATA FOR PRE-SELECTED SP DESTINATION
   000076
                                              ĹBSSC::
   000076
000104
              016667
012746
                         000002
                                                         MOV.
                                                                    2(SP),QR$LBR.
#<Q$LBD+Q$LBP>,-(SP)
                                                                                                    :MOVE-DATA TO-LOD-BUS-REG-
                         001001
                                                         MOV.
                                                                                                    CLEAR DRIVE AND PULSE CLR SELECTION BITS SET NO-CLOCKS
56
57
58
    000110
              052716
                         000360
                                                         BIS.
MOV
                                                                    #Q$CSEL,(SP)
    000114
              012746
                         176000
                                                                    #<0$NCLK>,-(SP)
   000120
              052716
                         000340
                                                                    #Q$SP2,(SP)
                                                         BIS.
                                                                                                    :SELECT SP
59
   000124
                                                         CALL
                                                                    CSR1
                                                                                                    :WRITE · CONTROL · REGISTER
60
61
   000130
              012746
                                                                                                    :CLEAR · SP · NO+CLOCK · BITS :SET · SP · CLOCK · ____
                         006000
                                                         MOV.
                                                                    #Q$RNC,-(SP)
#<Q$RSC+Q$LBD>,-(SP)
62
63
64
65
   000134
              012746
                         005000
                                                         MOV.
   000140
                                                         CALL.
                                                                    CSR1
                                                         DE-SELECTION
66
67
68
              012746
052716
012746
   000144
                         001001
                                                         MCV.
                                                                    #<Q$LBD+Q$LBP>,-(SP)
#Q$CSEL,(SP)
#<Q$NCLK>,-(SP)
                                                                                                    ;CLEAR · DRIVE · AND · PULSE ·
   000150
                         000360
                                                         BIS.
                                                                                                    CLR SELECTION BITS
69
70
71
   000154
                         176000
                                                         MOV.
   000160
                                                         CALL
                                                                    CSR1
72
   000164
              011666
                         000002
                                                                    (SP),2(SP)
                                                         MOV.
                                                                                                    :MOVE RETURN ADDRESS DOWN STACK
73
74
   000170
              005726
                                                         TST.
                                                                    (SP) +
                                                                                                    :POINT TO RETURN ADDRESS
   000172
                                                         RETURN.
```

795.75 SL

SPSUB-27-MAR-80 15:34 PAGE 7 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-8 O · M1110 76 77 78 79 80 81 82 83 84 000174 DATA · TRANSFER · TO · LOD · BUS · REG · FROM · SP OUTPUT: (SP) DATA FROM PRE-SELECTED SP SOURCE SPLB:: 85 86 012746 052716 000174 001001 #<Q\$LBD+Q\$LBP>.-(SP) #<Q\$CSEL+Q\$NCLK>.(SP) #<Q\$SP2>.-(SP) MGV. :CLEAR DRIVE AND PULSE :CLR SELECTION BITS/NO CLOCKS :SET-NO-CLOCKS 000200 176360 BIS. 87 88 89 000204 012746 000340 MOV. 000210 000214 CSRI (SP),-(SP) CALL MOV-011646 016766 MOVE-RETURN-ADDR-UP STACK, MOVE-DATA ONTO-STACK, MOVE-DATA 90 000214 90 000216 91 92.000224 93 000234 94 000234 176424 000002. MOV-QR\$LBR,2(SP) 012746 012746 000340 MOV. #Q\$SP2,-(SP) ;CLEAR·SP·SELECT: ;SET·NO+CLOCKS: ; 176000 MOV. #<Q\$NCLK>,-(SP) CSR1 94 95 CALL RETURN 000240

SPSUB MACRO M1118 27-MAR-80 15:34 PAGE 8 Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 97 98 99 100 ; SP CONTROL REGISTER LOADING 101 INPUT: 102 2(SP) BIT-SETTING-FOR-SP-CONTROL-REGISTER 103 104 105 000242 106 000242 016667 2(SP),QR\$LBR #<Q\$LBD+Q\$LBP>,-(SP) 000002 176424 MOV 107 000250 012746 001001 MOV. 108 000254 052716 000360 BIS: #Q\$CSEL,(SP) 109 000260 012746 000120 $\#Q\$SP_*-(SP)$ 110 000264 CALL CSR1 111 112.000270 005046 GLR -:CLEAR · NOTHING :SET · PULSE -(SP) 113 114 000272 012746 000001 #Q\$LBP,-(SP)000276 CSR1 CALL: 116 117 000302 000306 012746 000121 MOV. #<Q\$SP+Q\$LBP>, ;CLEAR·CR·SELECTION_AND_PULSE 005046 CLR. -(SP):SET-NOTHING 000310 CALL CSR4 119 120 000314 121 000320 122 000322 000314 00032**0** 011666 000002 MOV. (SP),2(SP) :MOVE-RETURN-ADDRESS DOWN-STACK :POINT-TO-RETURN-ADDRESS 005726 (SP)+ RETURN. 123 124

.END

000001

SPSUB- · · MOOD 0 · M1 SYMBOL · TA	110 27-MAR-80 15:34 PAGE 8 Approved F	3−1 or Release 2005/07/1 9 CIA	A-RDP85-00514R00020002	0001-3	
ALUCKE = 040000 ALUOE = 040000 A01 = 010000 BITYAL = 000001 BITI = 000001 BITI = 002000 BITI1 = 004000 BITI1 = 004000 BITI1 = 010000 BITI1 = 040000 BITI1 = 040000000000000000000000000000000000	BYTE42 = 000052 · BYTE43 = 000053 BYTE44 = 000054 BYTE45 = 000055 BYTE46 = 000056 BYTE47 = 000057 BYTE49 = 000061 BYTE50 = 000062 BYTE50 = 000063 BYTE52 = 000065 BYTE55 = 000065 BYTE55 = 000065 BYTE55 = 000065 BYTE55 = 000067 BYTE55 = 000071 BYTE58 = 000072	BYTE94= 000136 BYTE95= 000137 BYTE96= 000140 BYTE97= 000141 BYTE98= 000142 BYTE99= 000143 BYTE99= 000144 CBKALL= 001000 CBKCLK= 000400 CNOBRE= 100000 CPCCEN= 010000 CPCCEN= 010000 CPGADD= 000004 CSGCI= 100000 CSRI = ********** GX	QR\$LBR=-176424 Q\$ATTN=-000100 Q\$BCL000001 Q\$BCCCP=-000001 Q\$CCCP000040 Q\$CHRL000200 Q\$CHRL000000 Q\$CHRC000000 Q\$CPC000000 Q\$CPC000000 Q\$CPC000000 Q\$CPC000000 Q\$CPC0000000 Q\$CPC000000 Q\$CPC000000 Q\$CPC000000 Q\$CPC000000 Q\$CPC000000 Q\$CPC0000000 Q\$CPC0000000 Q\$CPC0000000000000000000000000000000000	Q\$SM = 100000 Q\$SP = 000120 Q\$SP2 = 000120 RGQ.EN = 000200 RGQ.YA = 020000 SEQ.CI = 000010 SPCR = 000242RG SPLB = 000000 S\$CLR = 000000 S\$CR = 000000 S\$CR = 000000 S\$QR = 000000 S\$QR = 000004 S\$QR = 000000 S\$QR = 000000 S\$QR = 000000 T\$QR = 000000 S\$QR = 000000 T\$QR = 000000 T\$QR = 000000 T\$QR = 000000 T\$QR = 0000000 T\$QR = 0000000 T\$QR = 0000000 T\$QR = 0000000 T\$QR = 00000000 T\$QR = 00000000000000000000000000000000000	002 002
TIT8 = 000400 U.T9 = 001001 DYT10 = 000001 TYT11 = 000001 UYT11 = 000012 UYT11 = 70012	TUTTED = - TERRATA TMTED = - TERRATA TMTESS= - 232374 TMTER1= - 233375 TMTER2= - TERRATA TMTER2= - TERRATA	DERGR = 2 DERGR = 37		TD61NL=-894899 TD50MEM=-688279 TD80AR=-176344 T1 50TR=-176345 T1-03RD=-833274 .756584175075	11

```
BYTE12= 000014
BYTE13=-000015
BYTE14=-000016
BYTE15= 000017
BYTE16=-000020
BYTE17=-000021
BYTE18=-000022-
                                                                                                 000000RG
000076RG
                                                                                                                      002-Q$LBP=-001001

002-Q$LBP=-000001

Q$LDCD=-000003

Q$LDMD=-000004

Q$LDPP=-002000
                                          BYTE69= 000105
                                                                                    LBSSC -
                                                                                                                                                                       T$RA
                                                                                                                                                                                 = 0000002
                                          BYTE7 = 000007
                                                                                    LOC.EN= 000100
                                                                                                                                                                        T$BD
                                                                                                                                                                                  = -0000010
BYTE19= 000023
                                          BYTE70= 000106
                                                                                    LOC.WA= 040000
LOC.WB= 100000
MAREN1= 000001
                                                                                                                                                                       7$B70 = 1000000
T$BT = 000020
T$BTAR = 000030
BYTE2 - - - 000002
                                          BYTE71= 000107
BYTE20= 000024
                                          BYTE72= 000110
                                                                                                                             Q$LHP = 02000
Q$LHP = 010000
Q$MNC = 140000
Q$MR = 000052
Q$MRP = 000040
BYTE21 = 000025
                                          BYTE73= 000111
BYTE74= 000112
                                                                                    MAREN2 = . 004000
                                                                                                                                                                       T$BTD = 002000
BYTE22= 000026
                                                                                    MARLOD= 010000
MAROUT= 000002
                                                                                                                                                                       T$CD = 000100
T$CLK = 002000
T$DISK = 000200
BYTE23= 000027
BYTE24= 000030
                                          BYTE75= 000113
                                          BYTE76= 000114
BYTE77= 000115
                                                                                    MAR.LO= 002000
                                                                                                                             Q$MRP2= 000040
Q$MRP2= 0000240
Q$MSET= 000004
Q$MSET= 100000
Q$MSP = 100000
Q$PP+ = 000100
BYTE25= 000031
                                                                                    MAR.OU= 000040
MBKALL= 001000
MBKCLK= 000400
                                                                                                                                                                       T$DRD - = . 000004
BYTE26= 000032
BYTE27= 000033
                                          BYTE78= 000116
                                                                                                                                                                       T$EMEM= . 010000
T$FSAA = . 000000
                                          BYTE79= 000117
BYTE8 = 000010
BYTE28= 000034
                                                                                   MMADRD = 000100
MMLEFT = 000002
MMOE - = 000004
                                                                                                                                                                       T$F$AB= 000004
BYTE29= 000035
                                          BYTE80= 000120
                                                                                                                                                                       T$FSAC= 000014
T$FSB2= 000010
T$IB = 000026
BYTE3 = 000003
BYTE30 = 000036
                                          BYTE81= 000121
                                                                                                                              Q$PPSW= 000320
                                                                                   MMURTE = 000010
MMURTE = 000010
MREN1 = 000001
MREN2 = 020000
MSYN = 000040
N = 000144
                                                                                                                             U$PPSW= 000320
Q$PP2·= 000300
Q$QHLT= 000013
Q$QL· = 000043
Q$QLA·= 000053
                                          BYTE02 - 000122
BYTE03 - 000123
BYTE31 = 000037
BYTE32 = 000040
                                                                                                                                                                       T$IBAR=.000024
T$IBE.=.020000
T$IBF.=.040000
                                          BYTE84= 000124
BYTE33= 000041
                                          BYTE85= 000125
DYTE34= 000042
DYTE35= 000043
                                          BYTE86= 000126
                                                                                                                             Q$QLB - - 000054
                                                                                                                                                                       T$ICD - 000040
                                                                                                                                                                      T$MODE = 004000 \( \text{T$MODE} = 004000 \\ \text{T$0B} = 004000 \\ \text{T$0BE} = 004000 \\ \text{T$0BE} = 010000 \\ \text{T$0BF} = 010000 \\ \text{T$0BF} \)
                                          BYTE87 - . 000127
                                                                                                                             Q$QLR·=·000001
Q$QW·=·000042
Q$RDCD=·000005
BYTE36= 000044
                                          BYTE88= 000130
BYTE89= 000131
                                                                                    PLB.
                                                                                             = 000010
3YTE37= 000045
                                                                                             = 000020
                                                                                   PLC:
มีYTE38= 000046
                                          BYTE9 = 000011
                                                                                             - 000030
                                                                                   PLD.
                                                                                                                             Q$RDMD= 000006
BYTE39 = . 000047
                                          BYTE90= 000132
                                                                                   PLRWR - = - 000200
                                                                                                                             Q$REBK= .001000
                                                                                                                                                                       T$0BRA= 000034
BYTE4 = 000004
                                         BYTE91= 000133
BYTE92= 000134
                                                                                    PLR.EN= 000200
                                                                                                                            Q$RNC -- 006000
Q$RSC -- 004000
                                                                                                                                                                       T$08WA= 000032
BYTE40=-000050
                                                                                   QR$CR1=:176420
QR$CR2=:176422
                                                                                                                                                                       T$OUTA= 100000
BYTE41 = . 000051
                                          BYTE93 = . 000135
                                                                                                                             Q$RSET= 000010
                                                                                                                                                                       T$RBD0=-000200
```

THE PROPERTY OF THE PARTY OF THE PARTY.

```
27-MAR-80 15:34 PAGE 8-2
Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3
SYMBOL TA
T$RNB - = - 000040
                                    WORD19=-000046
WORD2-=-000004
                                                                        WORD4 = 000010
WORD40= 000120
                                                                                                            WORD60=-000170
T$RSET=:040000
                                                                                                            WORD61= 000172
T$SC: =:000022
T$SCLK=:020000
                                    WORD20= 000050
                                                                        WORD41=-000122
                                                                                                            WORD62= 000174
WORD63= 000176
                                    WORD21=-000052
WORD22=-000054
                                                                        WORD42= 000124
T$SEG1= 000000
                                                                        WORD43= 000126
                                                                                                            WORD64= 000200
ï$SEG2= 000001
                                    WORD23= 000056
                                                                        WORD44= 000130
                                                                                                            WORD65=-000202
T$SEG3=-0000002
T$SO- =-0000001
                                    WORD24=-000060
                                                                        WORD45= 000132
                                                                                                            WORD66= 000204
                                    WORD25=-000062
                                                                        WORD46= 000134
                                                                                                            WORD67= 000206
WORD68= 000210
T$UBUS = 100000
                                    WORD26= 000064
                                                                        WORD47= 000136
T$1CLK= 000400
                                    WORD27= 0000066
                                                                                                            WORD68= 000210

WORD69= 000212

WORD7 = 000016

WORD70= 000214

WORD71= 000216

WORD72= 000220
                                                                        WORD48 = 000140
WORD49 = 000142
WORD5 = 000012
T$8BEN=:000020
                                    WORD28= 000070
UBD.IN= 000020
WORD0 = 000000
WORD1 = 000002
                                    WORD29=-000072
WORD3 =-000006
                                                                        WORD50= 000144
                                    WORD30= 000074
                                                                        WORD51= 000146
WORD52= 000150
WORD10=-000024
WORD11=-000026
WORD12=-000030
                                    WORD31=-000076
                                                                                                            WORD73=-000225
WORD74=-000224
WORD75=-000226
                                    WORD32=-000100
WORD33=-000102
                                                                        WORD53= 000152
                                                                        WORD54= 000154
WORD13= 000032
                                    WORD34= 000104
                                                                        WORD55= 000156
WORD56= 000160
                                                                                                            WORD76=-000230
WORD77=-000232
WORD78=-000234
WORD14= · 000034
                                    WORD35=-000106
WORD36=-000110
WORD15= 000036
                                                                        WORD57= 000162
WORD58= 000164
WORD16= 000040
WORD17= 000042
                                    WORD37=-000112-
                                                                                                            WORD79= 000236
                                    WORD38= 000114
                                                                        WORD59= 000166
                                                                                                            WORD8 = 000020
WORD18= 000044
                                    WORD39=-000116
                                                                        WORD6 = 000014
                                                                                                            WORD80=.000240
. ABS:
            000000
                            000
            000000
                            001
SPSUB-
            000324
                            002
ERRORS DETECTED:
VIRTUAL MEMORY USED: 3112-WORDS- (-13 PAGES)
DYNAMIC-MEMORY: 3860 WORDS- (-14 PAGES)
ELAPSED-TIME: 00:00:42-
SPSUB, SPSUB/+SP=[20.1]IM,[20.1]SPSUB
```

SPSHR. . . M

0 MI 110

WORD81=-000242

WORD82= 000244

WORD83=7000246

WORD84= 000250

WORD87 = . 000256

WORD88= 000260

WORD89= 000262 WORD9 = 000022

WORD90= 000264

WORD91=-000266 WORD92=-000270 WORD93=-000272

WORD94= 000274

WORD95=-000276 WORD96=-000300 WORD97=-000302

WORD98= 000304

WORD99= 000306

WRDVAL = . 000310

XTREAD= 001000

XTWRTE = . 000400

TOTAL CONTRACTOR

1¹

WORD85= 000252 WORD86= 000254₹7.0;

AIDQR.TSK

MEMORY ALLOCATION MAP TKB PAGE 27-MAR-88 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

TASK NAME : AIDQRPARTITION NAME : GEN
IDENTIFICATION : 08
TASK UIC : [20.3].
STACK LIMITS: 040176 041175 001000 00512.
PRG XFR ADDRESS: 043372.
TASK ATTRIBUTES: AL.CP :
TOTAL ADDRESS WINDOWS: 1.
TASK IMAGE SIZE : 7744. WORDS
TASK ADDRESS LIMITS: 0400042 000137 000076 00062.

AIDQR.TSK:7 OVERLAY DESCRIPTION:

BASE ·	TOP ·	LENG	TH·		
040000 072014 072364 072364 072364 072364	072013 072363 073557 073473 073657 073353	032014 000350 001174 001110 001274 000770	13324. 00232: 00636: 00584. 00700.	QMAIN. MRP.	MRLD MRPR MRREST MRBUG
072014 073520 073520 073520 073520 073520 072014 072014	073517 074373 076167 075327 075407 075303 072647 072567	001504 000654 002450 001610 001670 001564 000634	00836. 00428. 01320. 00904. 00952. 00884. 00412.	ECE.	CPBUG1 CPBUG2 CPREST CPLD CPPR
072570 072570 072570 072570 072014	075233 075167 074167 072573	000554 002444 002400 001400 000560	00364. 01316. 01280. 00768. 00368.	PPS.	PPLD: PPPR: PPREST:
072574 072574 072574	073647 073547 07261.	001054 000754 000020	00556. 00492. 00016.	31 *	SPLD: SPPR: SPREST

AIDOR.TSK:7 MEMORY ALLOCATION MAP TKB PAGE 2.0.7.412: CIA-RDP85-00514R000200020001-3

*** ROOT SEGMENT: QMAIN.

R/W-MEM- LIMITS: 040000 072013 032014 13324. DISK-BLK-LIMITS: 000042-000074 000033 00027.

MEMORY-ALLOCATION-SYNOPSIS:

	-				
SECTION,				TITLE ·· IDENT	FILE
. BLK::(RW,I,LCL,REL,GON)				At 100 100 100 100 100 100 100 100 100 10	
CPSUB :: (RW, I, LCL, REL, CON)	053056 (000502-	00322.	QMAIN.	
MRPSUB:(RW.I.LCL.REL.CON)	053056 (053560 (000502 · 000506	00322. 00326.	CPSUB.	CPSUB.OBJ;1
PPSUB : (RW.I.LCL.REL.CON)	053560 (000506 000766	00326. 00502	MRPSUB.	MRPSUB.OBJ;1
\$\$ALER:(RW,I,LCL,REL,CON)	054266	000766	00502.	PPSUB.	PPSUB.OBJ;1
\$\$ALVC:(RW.D.LCL.REL.CON) \$\$AUTO:(RW.I.LCL,REL.CON)	055300 0	300060	00048.		
\$\$FSR1:(RW.D.GBL.REL.OVR)	055510 9	001020	00528.		
\$\$F\$R2:(RW.D.GBL.REL.CON)		200104	00068.	QMAIN :	QMAIN.OBJ:1
\$\$MRKS:(RO,I,LCL,REL,OVR) \$\$OVDT:(RW,D,LCL,REL,OVR)	056634 (300020	00016.		•
\$\$0VRS:(RW,I,LCL,ABS,CON) \$\$RDSG:(RO,I,LCL,REL,OVR)	000000	000000	00000.		
\$\$RESL:(RW.I.LCL.REL.CON) \$\$RGDS:(RW.D.LCL.REL.CON)	056654 (312270	05304.		
∌\$RTS::(RW,I,GPL,REL,OVR)	071144 0	300002.	00002.		
\$\$SGD0:(RW.D.LCL.REL.OVR) \$\$SGD1:(RW.D.LCL.REL.CON)	071146	000374	00252.	•	
\$\$SGD2:(RW,D,LCL,REL,OVR) \$\$WNDS:(RW,D,LCL,REL,CON)	071542 0 071544 0	300002. 300000	00002. 00000.		

GLOBAL SYMBOLS:

APLACE 041234- /- ASCIZ 043063- /- - HSTFLG 000200 HSTWRD 041364-R-	BUFS4 043736-R CDHIGH 041430-R	· DATA1 041404-6 · DATA2· 041406-6	ERRI 0461			HLLOW 041452-R INCVAL 041376-R IO.DET 002000	LHLOW LOOP	041446-R 000004 044602-R
BASE 041232-R 3CE 055320-R	CL 043646-R COMXX 043532-R	DATA4 041412-6 EFBUF 041212-6	R ERR12 0460 R ERR2 0461	16−R⋅ GCMBUF	·043064-R ·041236-R	IO.RVB 010400 IO.WVB 011000 KILL 044762-R	MDH I GH	000001 ·041420-R· 041422-R·
3LHIGH:041454-R: 3LLOW: 041456-R:	CP: 055310-R: CPCR: 053470-R:	EFN.2 000002	ERR4 0461	12-R: GCMLEN 36-R: GCMPNT 32-R: GCONLY	· 041362+R ·	LBCSC 053322-R	MEND : MMHIGH :	041374-R 041414-R 041416-R
BREAK - 004000 BUFSET - 044010-R - SUFSM - 044026-11	CPLB: 053420-R:	m 1 1 1 1 0 0 0 0 0 0 1	ERR6 04601 ERR7 04601	76-R. G.DPRM 72-R. HANG.	000160 044624-R	LBMSC 05/070 B LBPP: 05/266 R	MRPCR	.055300-R .054176-R
øUFS2⋅ 043772+R⋅	CSLOW- 041426-R-	ENDTST 046016-R				LBPSC 054364-R		· 054204-R · 054126- <u>R</u>

AIDOR.TSK

MEMORY ALLOCATION MAP TKB 27-MAR-80 Approved For Release 2005/07/1 CIA-RDP85-00514R000200020001-3

SDHIGH 041470-R SDLOW 041472-R MSTRT-041370-R OUT1 046042-R PRINT. SQHIGH-041460-R-SQLOW- 041462-R-SRHIGH-041464-R-TRTBL 041474-R TRTBL2:041673-R TSKTCB:041202-R .841746-R \$CEFI \$DIV 005174 MSTR2 041372-R MYSELF 041176-R PACK 045324-R QXHIGH 041434-R 007146 017134 007116 PDATA: 044162-R 054532-R QXLOW: 041436-R SELPG 054614-R \$DRDSE \$MUL NEQLB -010000 PPCR-SEQCS -SEQMM -SPCR -053056-R 053560-R 055350-R RP 001000 RSPCNT 041400-R SRLOW. 041466-R UNPK 045544-R OLDVEC:041204-k PPLB. 054462-R STAT STOP 041222-R 046036-R UPLIM 041402-R \$TKTCB 004026 ONCE: 000100 PPS 055330-R RTHPT. 041366-R WRTCS WRTMM. 053144-R PRDATA:044354-R: OUT: 002000 SCAN-045114-R SPS. 055340-R TIME 046022-R 053646-R

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MEMORY ALLOCATION MAP TKB Approved For Release 2005/07/12 : CIA-RDP85-00514R000200020001-3 AIDQR.TSK;7 MRP.

*** SEGMENT: MRP.

R/W-MEM- LIMITS: 072014 072363 000350 00232. DISK-BLK-LIMITS: 000075 000075 000001 00001.

MEMORY-ALLOCATION-SYNOPSIS:

SECTION. .

TITLE . IDENT: FILE . .

MRP.OBJ:1

BLK::(RW.I,LCL,REL,CON) 072014 000000 00000. RP::(RW.I,LCL,REL,CON) 072014 000226 00150.

GLOBAL SYMBOLS:

072322+R· GO1 072262+R· LD1 072332-R · MRP 072064-R: OF1 072342-R RE1 072272+R. SS1 CLI 072242-R · MRPXX · 072144-R · PRI 072302-R - ST1 072312-R

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